

ADOPTED

Comprehensive



pedestrian

Plan

Town of Jefferson

NORTH CAROLINA



WE RECYCLE

 **McGill**
ASSOCIATES
ENGINEERING · PLANNING · FINANCE



Comprehensive Pedestrian Plan

Table of Contents

SECTION 1: INTRODUCTION

- 1.1 Introduction
- 1.2 Benefits of Walking
- 1.3 Planning for Pedestrians in the Town of Jefferson
- 1.4 The Planning Process

SECTION 2: EXISTING CONDITIONS

- 2.1 General Overview
- 2.2 User Demographics/Current Users
- 2.3 Community Needs, Concerns and Priorities
- 2.4 Staff and Agency Concerns and Issues
- 2.5 Identify Private Sector Concerns/Perspectives
- 2.6 Pedestrian Safety
- 2.7 Street and Highway System Access
- 2.8 Pedestrian System Access
- 2.9 Inventory and Assessment of Existing Facilities
- Map 1 Pedestrian Inventory Plan - East
- Map 2 Pedestrian Inventory Plan - West

SECTION 3: EXISTING PLANS AND POLICIES

- 3.1 Overview
- 3.2 Transportation Plans
- 3.3 Local Plans and Initiatives
- 3.4 Regional Plans
- 3.5 Policies and Institutional Framework
- 3.6 Pedestrian Statutes and Local Ordinances
- 3.7 Key Findings from Existing Plans and Policies



SECTION 4: PEDESTRIAN NETWORK PLAN

- 4.1 Overview
- 4.2 Pedestrian Network Methodology
- 4.3 Recommended Pedestrian Facilities
- 4.4 Special Focus Areas
- Map 3 Proposed Pedestrian Network - East
- Map 4 Proposed Pedestrian Network - West

SECTION 5: DESIGN GUIDELINES

- 5.1 Overview
- 5.2 Pedestrian Facility Elements

SECTION 6: POLICY AND PROGRAM RECOMMENDATIONS

- 6.1 Overview
- 6.2 Policy Recommendations
- 6.3 Other Policies
- 6.4 Program Recommendations

SECTION 7: IMPLEMENTATION

- 7.1 Overview
- 7.2 Opportunities and Strategies
- 7.3 Action Steps
- 7.4 Prioritization of the Proposed Pedestrian Network
- 7.5 Ancillary Facilities and Programs
- 7.6 Staffing
- 7.7 Funding
- 7.8 The Town of Jefferson Comprehensive Pedestrian Plan

APPENDIX





Section 1

Introduction

1.1 INTRODUCTION

Scope and Purpose

The purpose of the Comprehensive Pedestrian Plan is essentially to create a document to guide the Town of Jefferson in the (1) planning, (2) design, (3) financing, (4) implementation and (5) maintenance of the Town's pedestrian system. The plan is designed to identify and prioritize capital improvements and maintenance projects for the Town with special consideration for addressing critical pedestrian transportation and safety issues as well as addressing Americans with Disabilities Act compliance issues.

The goals of the Jefferson Comprehensive Pedestrian Plan are:

- Enhance the pedestrian environment and increase opportunities to choose walking as a safe mode of transportation.
- Improve the health of the citizens of the Town of Jefferson.
- Develop standards that enhance livability, economic opportunity, safety and quality of life.
- Promote pedestrian activity as a viable alternative to automobile use.



Downtown Jefferson, North Carolina

Until the 20th Century, walking was the primary method of traveling between destination points. The development of the automobile changed the mode of transportation from pedestrian to vehicular. The Town of Jefferson was no exception to this transformation. The post World War II era changed from a pedestrian-oriented to a vehicular-oriented environment. Over the past decade however,



communities throughout North Carolina have reversed the trend and have recently begun providing facilities for pedestrians and bicyclists. The development of these facilities was largely due to the demand by local communities for better alternative transportation opportunities. This proactive approach of implementing bicycle and pedestrian facilities has led to the focus by municipalities on developing planned bicycle and pedestrian transportation systems. The North Carolina Department of Transportation's (NCDOT) Division of Bicycle and Pedestrian Transportation (DBPT) has recognized the importance of this comprehensive planning effort.

McGill Associates, P.A., was contracted by the Town of Jefferson to prepare the Pedestrian Plan as a guide for identifying and prioritizing safe pedestrian linkages which create a viable pedestrian network. Many areas within the Town lack sufficient pedestrian facilities and the Town recognizes the need to plan for the future and develop a pedestrian network that provides connectivity for the users. Using the proactive approach will establish priorities for future pedestrian facilities, reduce construction costs and implement facilities in a logical manner.

The study area spans the Town of Jefferson town limits and the immediate, surrounding areas. Although the research will be focused primarily within the Town limits, it is important to understand the existing pedestrian patterns into and out of Jefferson and its destination points.

The Jefferson Pedestrian Plan is designed to implement goals and objectives and prioritize capital improvements and maintenance projects for the Town, while addressing issues for pedestrian transportation and safety. The long-term goals for the Plan are to provide the Town of Jefferson with a safe and efficient alternative to vehicle use. Providing pedestrian corridors to desired destinations is vital in developing a pedestrian network that is efficient and user-friendly. The long-term goals of creating a successful pedestrian network include, but are not limited to:

1. Public Awareness
2. Education
3. Accessibility
4. Connectivity



In addition to the long-term goals, it is critical to address the short-term goals for creating a successful pedestrian network. These include:

1. Identifying the Critical Facility Needs
2. Developing an Implementation Plan
3. Ascertaining Improvement Costs
4. Identifying Key Funding Opportunities
5. Prioritizing the Improvements/Projects

1.2 BENEFITS OF WALKING

Walking is the oldest form of transportation known to mankind. The most affordable method of transportation, it also has the lowest negative impact on the environment. The following results are generated in a 'walking' community:

Community Health

There are numerous benefits to be gained by walking, the most prevalent being the acquisition of healthier lifestyles. Unhealthy eating habits, primarily due to the increased consumption of fast food, continue to contribute to rising obesity rates in Americans of all ages. Walking can also help prevent heart disease, cancer, diabetes and mental health diseases. 'Walkable communities' encourage people to walk, increasing physical activity and decreasing television or computer time, which promulgate sedentary lifestyles.



Walking encourages a healthy lifestyle.

By providing accessible, inviting pedestrian facilities, the Town can provide equal opportunities for everyone to improve health and prevent disease through exercise. This in turn, saves governments and local employers money in health care costs and lost productivity due to sick days.



Walking Increases:

- Energy, stamina and metabolism
- Wellness, fitness and psychological well-being
- The prevention of risk factors such as Coronary Artery Disease, some cancers and other diseases
- HDL – the ‘good’ cholesterol
- Muscle development and bone density

Transportation Alternatives

Walking also creates an alternative to vehicular transportation. Nationally, traffic congestion in urban areas is getting worse and costing more. Pedestrian facilities are necessary to provide a means whereby people may choose to walk instead of drive, reducing the number of cars on the road.

Environmental Benefits

Not only does walking decrease traffic congestion, but it also improves the environment. Choosing to walk to destinations as an alternative to using a vehicle will reduce air pollution. Improving air quality is a major concern across the United States. During the 1996 Olympics in Atlanta, some roadways in the area were closed to vehicular traffic in order to relieve congestion. During this period of time, air quality monitoring was conducted and the results indicated a significant decrease in air pollutants as compared to the normal periods of normal traffic patterns. Air pollutants will increase in direct proportion to the increase in the number of vehicular miles that are traveled each year in this



Greenways provide a number of benefits including pedestrian and bicycle pathways.



country. Walking, as opposed to driving vehicles, will also positively impact the availability of our natural resources. Reducing the consumption of petroleum (specifically in cars and asphalt) will be increasingly beneficial in the years to come.

While sensitive populations should avoid walking during ozone action days, increasing the amount of walking by everyone on a regular basis could reduce mobile emissions and decrease ozone.

Facilities such as greenways are often developed along rivers and streams. These facilities create buffers between drainage ways and development that help to improve the water quality for watersheds. In addition, greenways help provide connectivity for wildlife habitats and natural ecosystems.

Community Benefits

Pedestrian facilities offer an important public realm for maintaining and enhancing the public and social interaction of a community. Sidewalks provide space for walking, outdoor dining, window shopping, bench areas for social interaction, engagement with businesses and tourism.

1.3 PLANNING FOR PEDESTRIANS IN THE TOWN OF JEFFERSON

We are all pedestrians. For centuries the pedestrian has been a constant presence in the human environment. Each day, most individuals walk to some destination, whether near or far. The environment which facilitates walking is different for every pedestrian; it is as varied as urban settings within center cities to linear parks running along creeks. Pedestrian environments are created either by being deliberately planned or they can develop as a result of landscape characteristics, with no particular thought towards the pedestrian. To better understand what makes a pedestrian-friendly environment, it is necessary to study and analyze places where people travel comfortably as pedestrians. The addition of a sidewalk alone may not encourage people to walk; unless it connects pedestrians to places they want to go, they will see no need to use it. These connecting pedestrian corridors need to be conveniently located in proximity to homes, schools, entertainment, shopping and places of employment.

Walking is a cost-effective means of transportation. There are no fees, taxes or licenses required as compared to the average annual cost of operating a car, which, can exceed





\$5,000 per year. Economically speaking, walking is by far, the most affordable mode of transportation available to anyone.

The pedestrian environment should provide pleasant places through which to walk. Open spaces, parks, the downtown area, convenient retail and other destinations all enhance the pedestrian environment. In addition, the ideal pedestrian environment should possess amenities such as landscaping, benches, specialty paving, safety and other elements that create an environment that pedestrians enjoy.

The walking community needs to be safe and comfortable. Any area which seems dangerous or has obstacles discourages people from walking and they resort to other methods of transportation. Pedestrian routes need to be designed to minimize vehicular conflict by providing pathways which are safe and free of hazards. This is the essential purpose of this Comprehensive Pedestrian Plan.

1.4 THE PLANNING PROCESS

In order to better understand the existing conditions, identify user needs and make recommendations for the pedestrian plan, the following steps will be followed:

- 1. Conduct an inventory of the existing pedestrian system:** Provide an existing sidewalk, greenway and crosswalk inventory for the Town's pedestrian facilities and identify existing safety issues.
- 2. Perform an assessment of the needs of the pedestrian:** Identify and evaluate pedestrian needs and areas that are lacking connectivity to destination areas.
- 3. Formulate objectives and recommendations:** Provide guidelines for future development and for the repair of existing facilities along with the probable costs associated with both.
- 4. Prepare an action-oriented method for the implementation of improvements:** Identify and prioritize key pedestrian linkages, sidewalk needs (through an equitable and on-going process) and identify key funding sources for the Town to pursue.

These components provide justification for the eventual proposed improvements. Also, priorities for improvements must be established. Implementing all of the proposed improvements over a small period of time would be overwhelming; it is important that the most immediate needs be recognized as capital improvements begin.



Identifying the critical pedestrian facility needs of the Town of Jefferson means identifying improvements such as sidewalks and safety conditions. The safety of pedestrians is the most important component of the pedestrian facilities. Damaged sidewalks, unmarked crosswalks and inappropriate signage are important areas that need to be addressed in the near future. In addition to facility needs, an implementation plan is an important short-term goal in establishing long-term objectives. The improvements recommended in this Pedestrian Plan are intended to be implemented over a period of time and will require creative funding mechanisms. Therefore, other significant short-term goals are to identify improvement costs and funding opportunities, as well as prioritizing the improvements and projects.

Pedestrian facilities will be the primary focus of this plan, in particular, sidewalks (located on Town streets and state roads) and pedestrian safety. In addition, off-street pedestrian facilities such as greenways and multi-purpose trails will be examined. The Jefferson Pedestrian Plan will delineate the location, implementation and maintenance of the proposed facility improvements, thereby creating a pedestrian network that allows for connectivity within the Town as well as with neighboring communities.

- END OF SECTION -



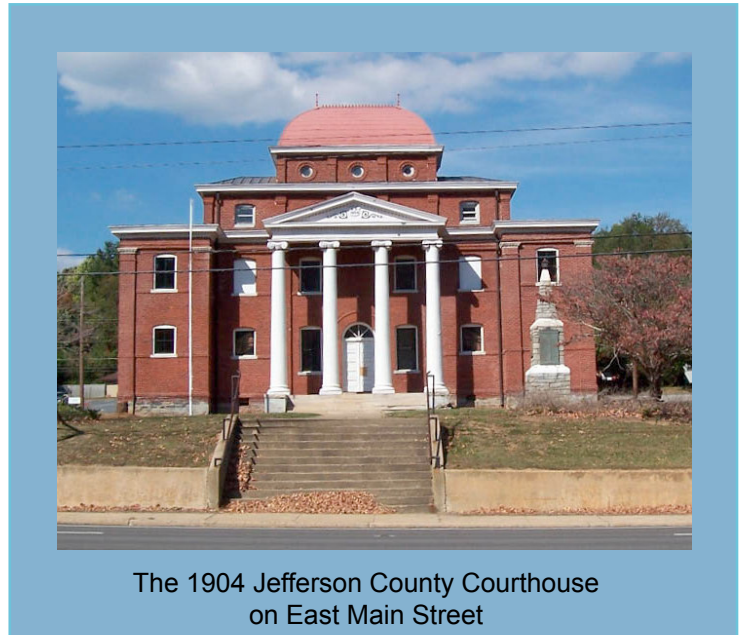
Section 2

Existing Conditions

2.1 GENERAL OVERVIEW

When Ashe County was formed in 1799, 50 acres of land were purchased for the county seat. The new town was named Jeffersonton, in honor of the then, Vice-president, Thomas Jefferson. The name was shortened to Jefferson shortly thereafter. By 1803, the streets were laid out and the first government offices were built.

In 1904, a new County courthouse was built on Main Street. Today, that courthouse is being renovated to serve as a home for the Museum of Ashe County History. A new courthouse opened in 2001, just off of US Route 221, on Government Circle.



The 1904 Jefferson County Courthouse
on East Main Street

Jefferson is also the location of Ashe Memorial Hospital, a full service facility that serves as the hospital for Ashe County.

2.2 USER DEMOGRAPHICS/CURRENT USAGE

According to the United States Department of Commerce, Division of the Census, the population of the Town of Jefferson in 2000 was 1422 people. The North Carolina State Demographics Department estimated the 2006 population at 1435 people. This gives the Town of Jefferson a population density of 755 people per square mile.



The 2000 Federal Census gives a breakdown of the population of Jefferson according to age groups.

Age	Jefferson	Percentage	North Carolina
15 and younger	163	11.5	20.5
16 – 24	136	9.6	13.9
25 – 44	302	21.2	31.1
45 – 64	328	23.1	22.5
65 and over	493	34.7	12.0
Average Age	49.99		36.32

The Town of Jefferson's population varies greatly from the averages for North Carolina. The population is heavily weighted to adults, and the largest group is the 65 years and older demographic. This group of senior adults is almost three times larger than the state average for the same demographic. As the Baby Boomers age, the elderly population continues to increase and transportation implications need to be considered. It is accepted fact that aging can have a negative impact on our driving skills. For many senior adults, alternate forms of transportation other than a personal automobile are becoming a necessity.

With adults living longer, there will be increased demands for 'walkable' communities. In general, pedestrian-friendly environments indicate that the sense of community is strong and active. The Town and surrounding communities will continue to increase in popularity as destinations for visitors nationwide. Improving the walkable routes between destinations within Jefferson supports walking and provides a safe and healthy alternative to driving. The trends consist of, but are not limited to:

- (1) Healthy lifestyles
- (2) Alternative transportation
- (3) Reduction of environmental impacts.

2.3 COMMUNITY CONCERNS, NEEDS AND PRIORITIES

The leadership of the Town of Jefferson is supportive of pedestrian planning. The Town Board expressed strong support for the opportunity provided by the NCDOT grant and the formulation of a Comprehensive Pedestrian Plan.



In order to ensure a successful study, it is vital that the public user of pedestrian facilities be able to share their issues, needs, and desires. The methodology used in establishing a Pedestrian Plan for municipalities should always include citizen input.

To better understand the needs of facility users, different methods were conducted to identify specific concerns/demands of Town residents. The variety of methods not only offer options to local citizens but also presents additional information than cannot be assessed from one method. These methods consisted of establishing a steering committee and conducting a public meeting .

Developing Public Involvement and Community Awareness Strategies

Steering Committee

To establish a group to act as a *guide* for the development of the Pedestrian Plan, a steering committee was formed during the initial planning process to identify the needs and priorities of pedestrians. The steering committee was composed of Town staff, Town Council, Town Planning Board and NCDOT Representatives. The names of Steering Committee members can be found in the Acknowledgments section at the beginning of this document.

The steering committee acted as the principle advisory body to the pedestrian plan project. In addition, several meetings were held to evaluate the planning process at various stages. The steering committee members participated in the planning process by collecting data and conducting an inventory of existing conditions. Members of the steering committee were given specific investigative tasks, such as safety, transit, planning, recreation, et cetera, which would eventually be assessed and evaluated as part of the plan.

Public Meeting

A public meeting was held offering Town residents the opportunity of giving input with regard to facilities, traffic, and safety. It is always imperative that the public be involved in the planning process in order that they may fully understand all of the different perspectives that evolve. The active participation of residents in the Town was crucial in developing a pedestrian plan that truly reflected the needs of the Town.

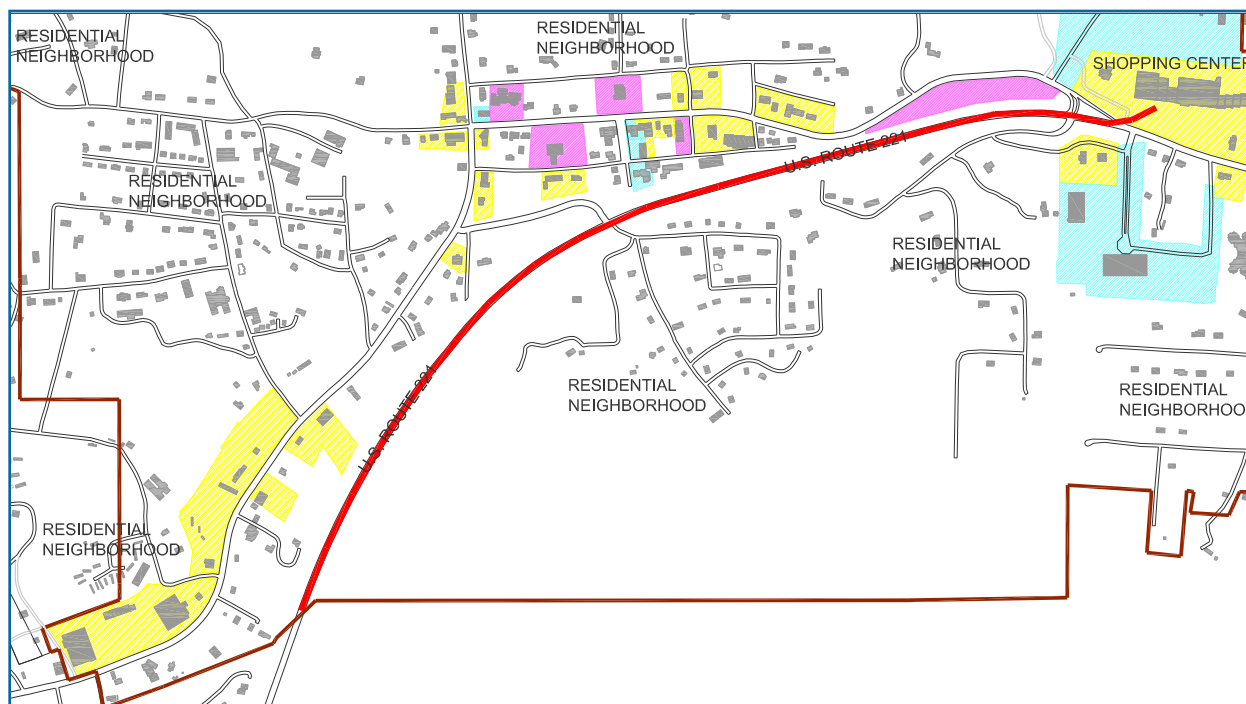




This public meeting was conducted early in the planning process, on Tuesday, November 20, 2007. Held at the Town Hall, this meeting allowed community residents an opportunity to voice their opinions on the topic of a pedestrian community. As part of the meeting, participants were asked to discuss the improvements that they deemed necessary for existing pedestrian facilities as well as needs for additional facilities. To encourage participation in the public meeting, the local newspaper advertised the upcoming meeting and the town staff contacted area business owners offering them the opportunity of commenting on the needed improvements to pedestrian facilities and expressing their desire for the future addition of facilities.

Local residents noted areas that were lacking in pedestrian facilities. The following is a list of areas of concern:

- (1) US Route 221 was considered a higher priority for pedestrian facilities than other areas within the Town limit. The highway serves as a route from existing neighborhoods to a major shopping center and there are no safe pedestrian or bicycling facilities other than the paved roadway itself. In addition, there are no safe means for pedestrians to cross the highway.

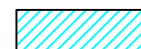


KEY

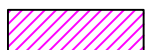
CORRIDOR OF CONCERN



GOVERNMENT/HEALTH SERVICES



CULTURE/RECREATION

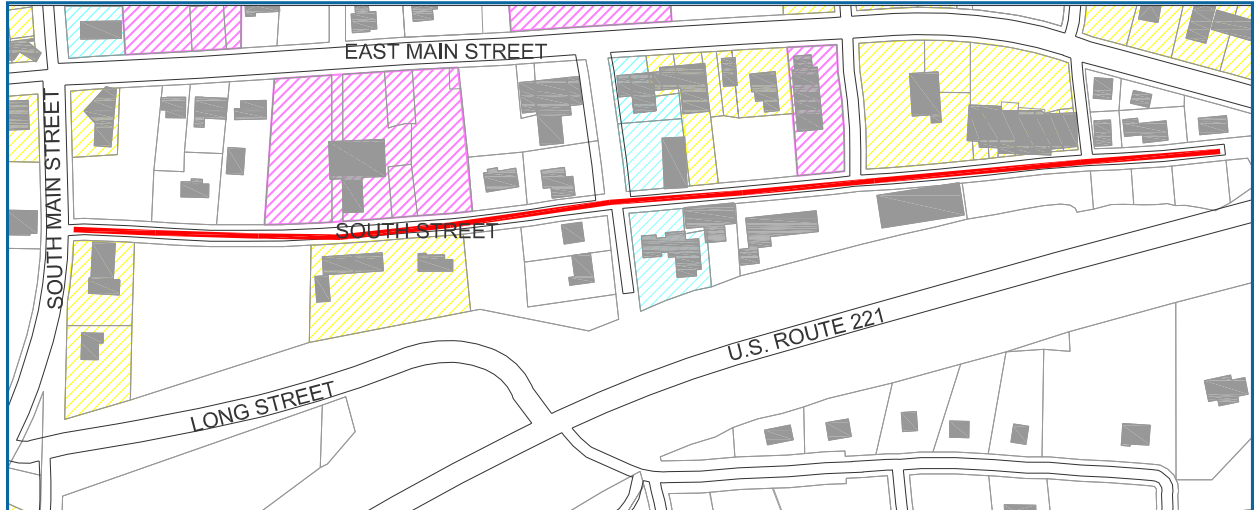


COMMERCIAL/RETAIL

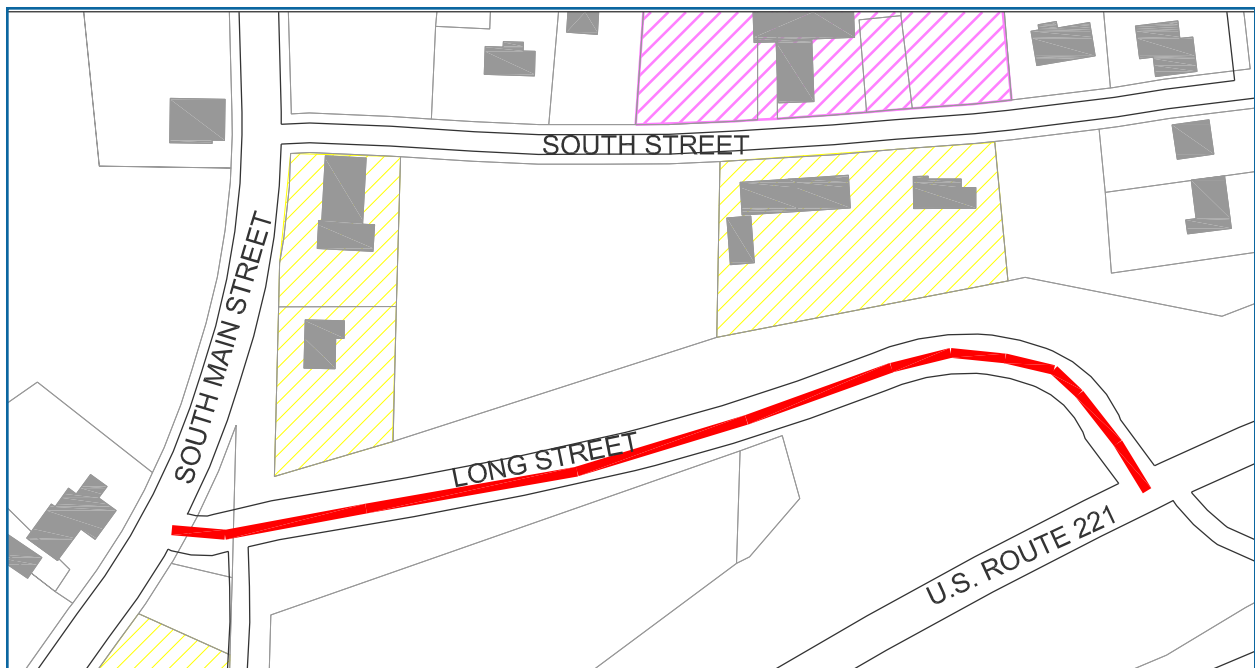




- (2) South Street is a mixed neighborhood of residences, churches and businesses. Currently there are no sidewalks along this street.

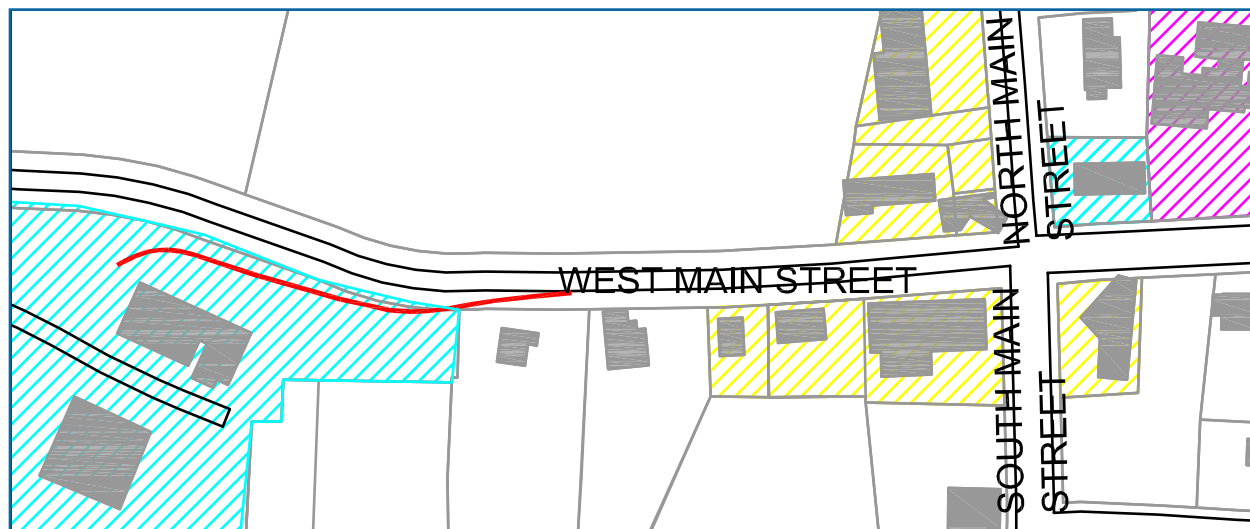


- (3) Long Street is a short corridor that connects from US Route 221 to South Main Street. It is a commercial district and currently has no sidewalks.

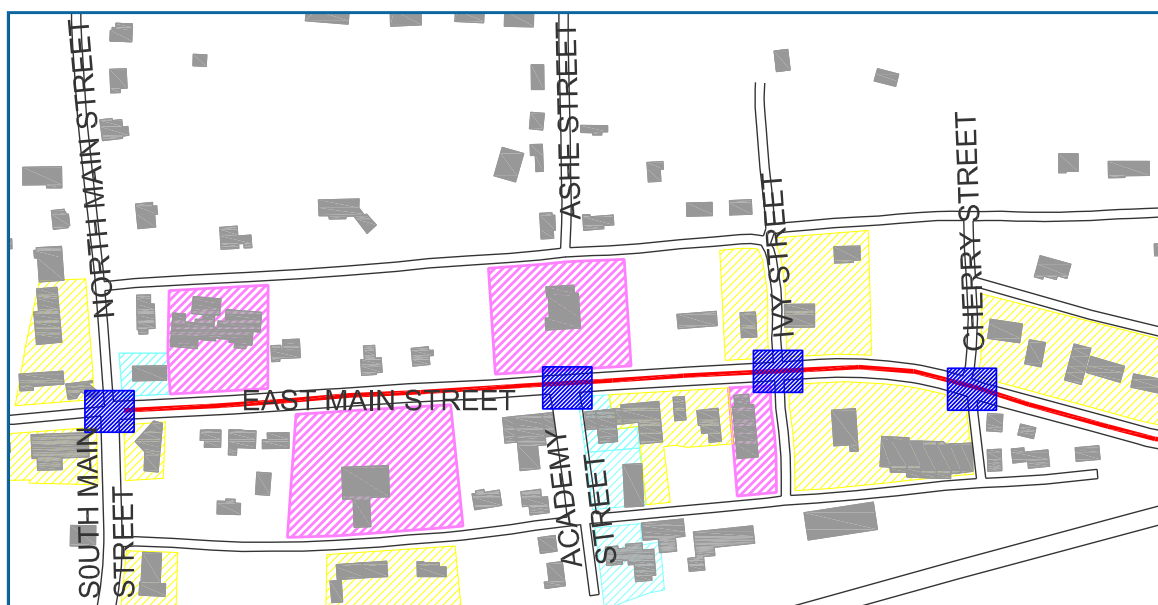




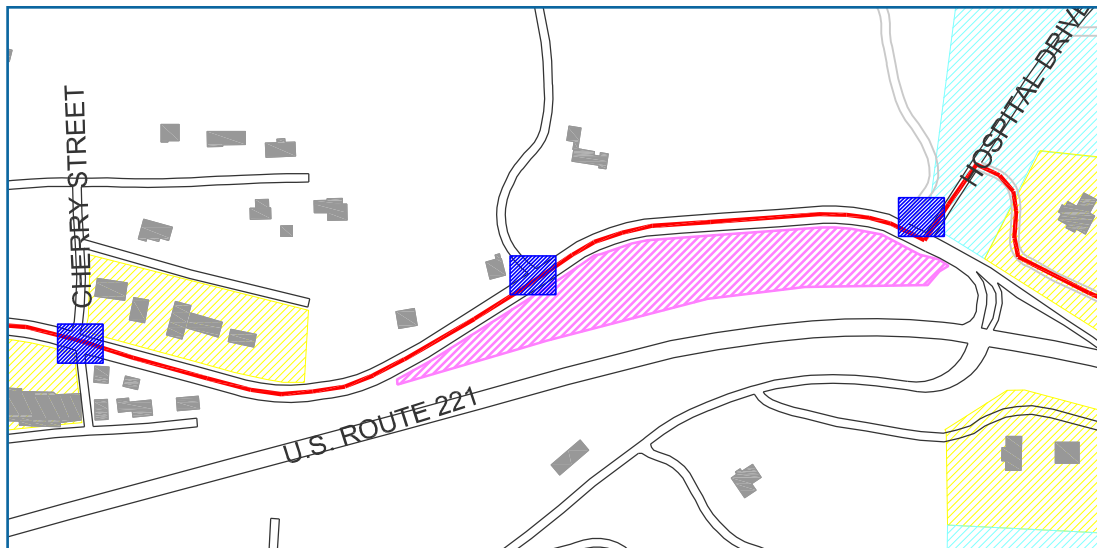
- (4) West Main Street was identified as an area with an existing sidewalk in poor condition. The sidewalk leads from an area of existing residential and commercial neighborhoods into the downtown.



- (5) East Main Street Pedestrian Crossings were identified as specific needs for the downtown area. Areas of concern were at Cherry Street, Hospital Drive, Ivy Street, Academy Street and the corner of West, East, South and North Main Streets. The sidewalk needs to be extended into the shopping center on US Route 221.

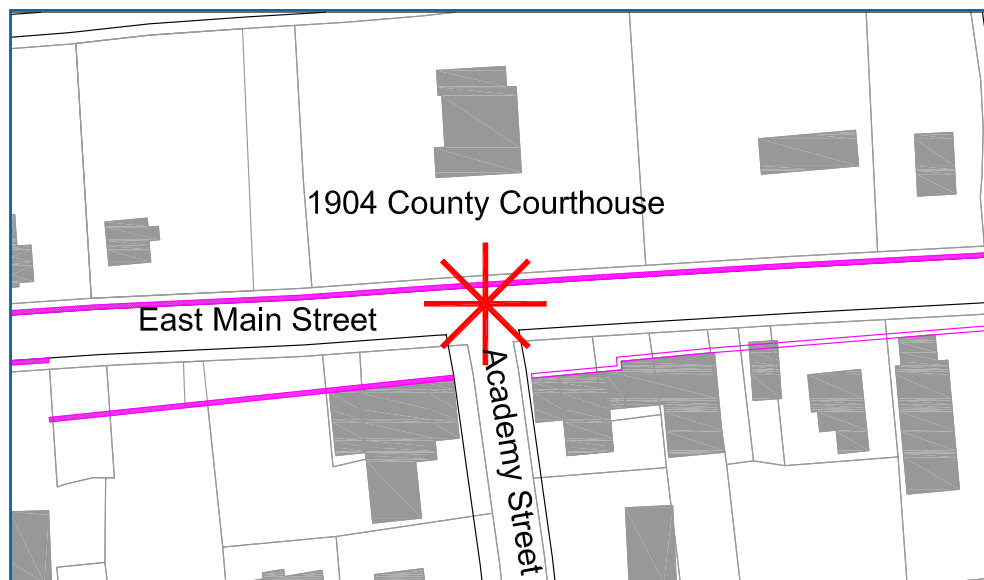


Map 5a



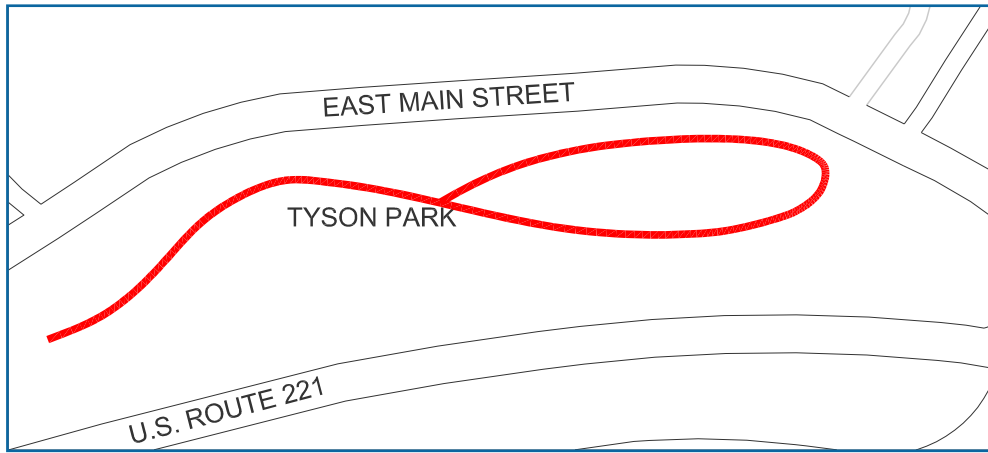
Map 5b

- (6) The 1904 Courthouse should become a focal point along the pedestrian corridor of East Main Street.

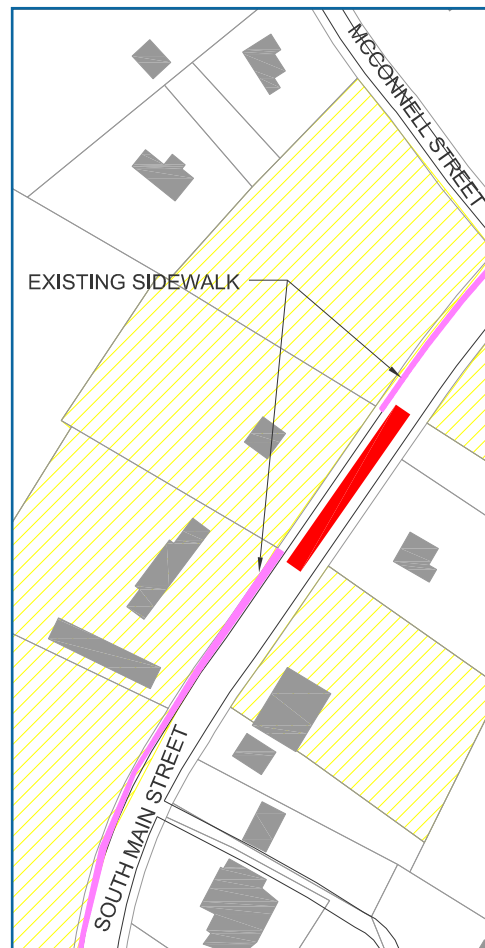
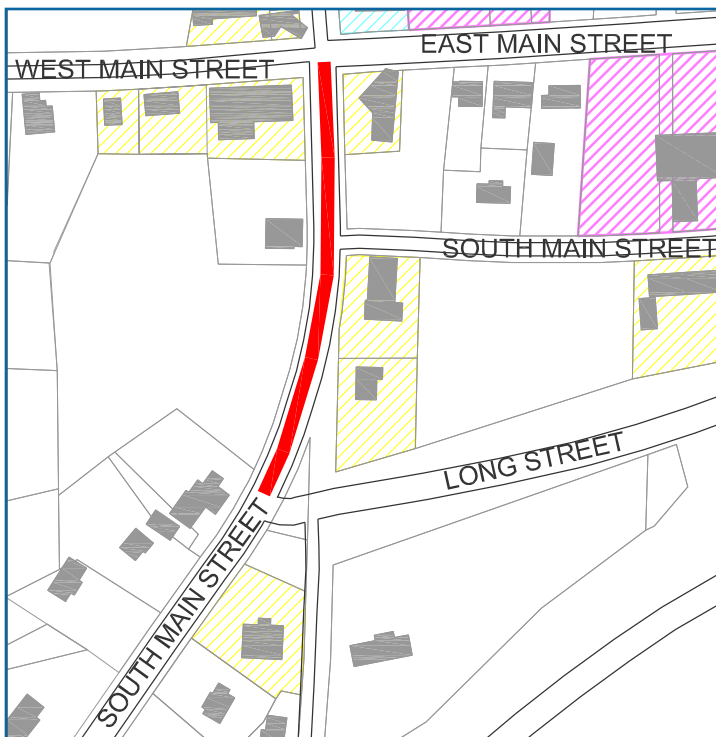




- (7) Tyson Park needs a natural surface walking track in addition to the existing paved path.

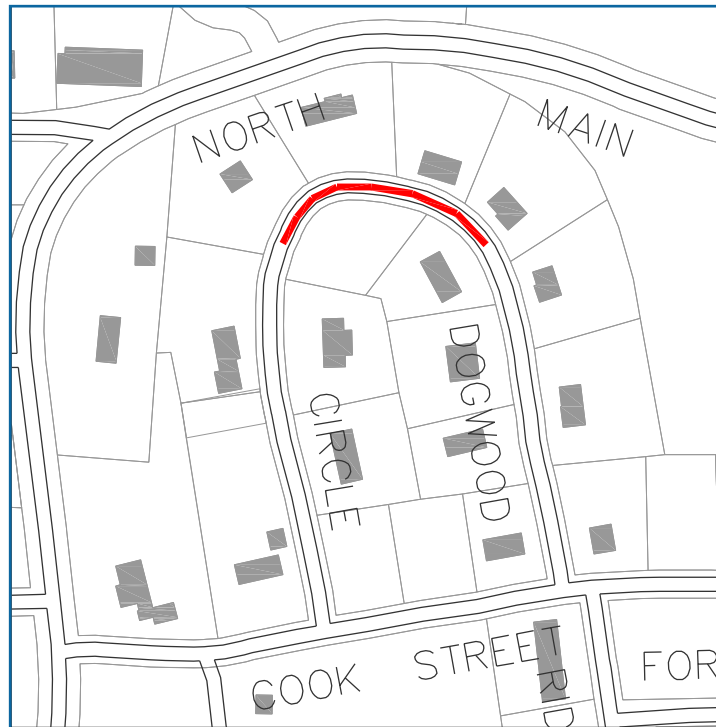


- (8) The South Main Street sidewalk needs to be extended to provide one continuous paved pedestrian path along its length.

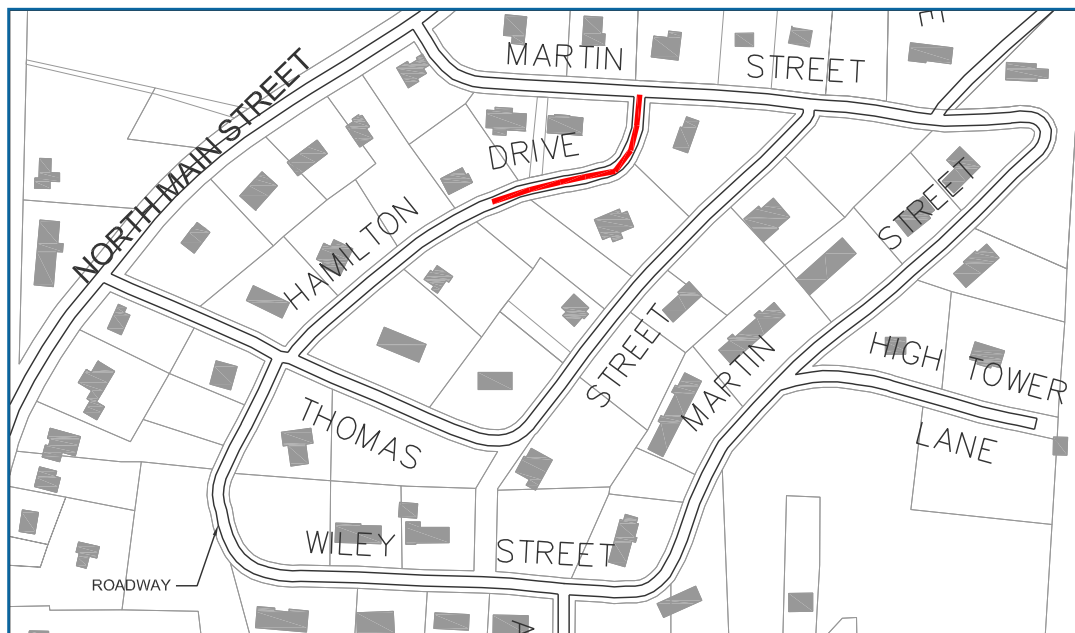




(9) The roadway at Dogwood Circle needs to be paved.

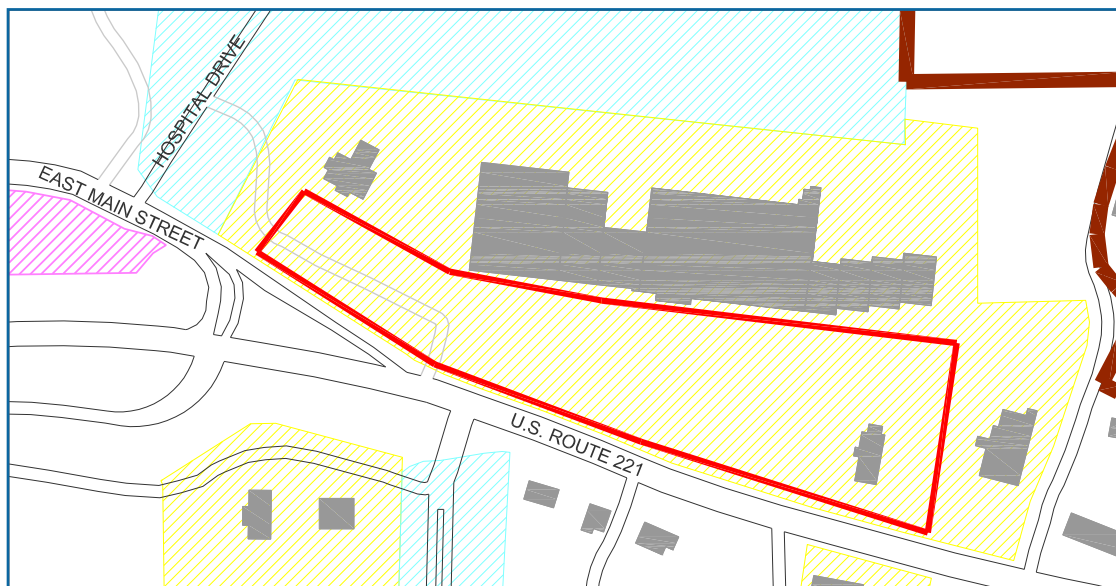


(10) The roadway at Hamilton Drive needs to be paved.





- (11) The Route 221 Shopping Center parking lot needs to be renovated to include pedestrian safety measures.



2.4 STAFF AND AGENCY CONCERNS AND ISSUES

The Town staff played a major role in the development of the Jefferson Pedestrian Plan. Input from the Town's departments is *critical* in understanding particular concerns and issues that exist. In addition, the collaboration *between* departments gives a better, total understanding of issues and concerns that are present. The following are issues, problems and concerns which were identified by specific municipal departments as they relate to pedestrians and the planning process.

Town Manager's Office

The Town Manager recognizes there is a need to improve the connectivity and safety of the Town's pedestrian facilities. There are several areas within the Town that lack pedestrian facilities and existing facilities are fragmentary. Many of the local streets and roads may have sidewalks on *portions* of the street but the sidewalks do not continue the entire length that is needed. There is no cohesive pedestrian



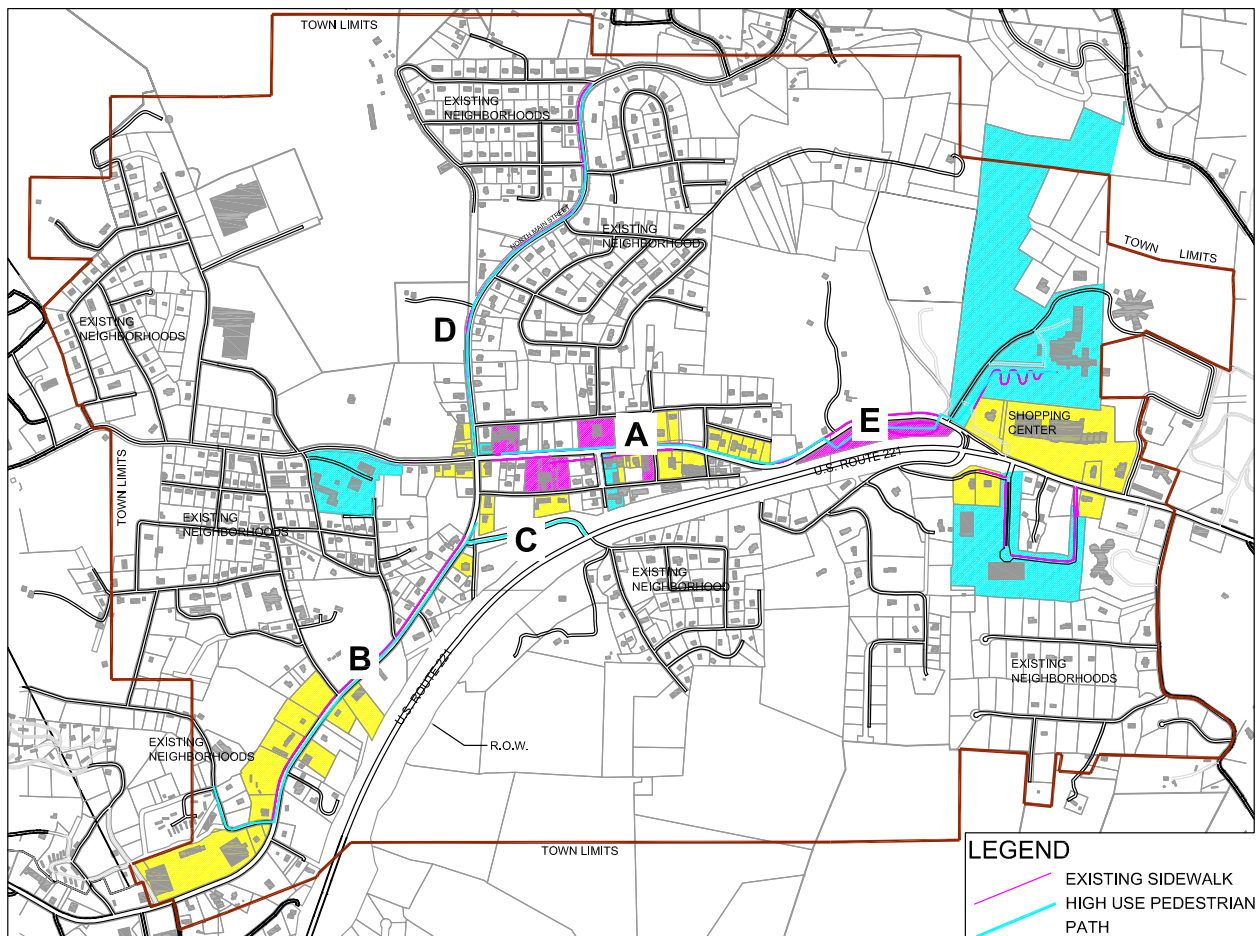
The lack of a sidewalk due to a retaining wall, creates a safety hazard to pedestrians who are forced to walk in the street.



system that allows a pedestrian to traverse safely from one area of Jefferson to another. Additionally, the Town Manager recognizes the need to address pedestrian facilities for future development. The following are areas of concern, which need addressing - High Volume Pedestrian Walking Areas, Major Retail/Commercial Areas, and Connectivity Issues (refer to Maps 2.4-a,b and c. Enlarged maps are in the Appendix, pg. IX-XI)

High Volume Pedestrian Walking Areas:

- A. East Main Street
- B. South Main Street
- C. Long Street
- D. North Main Street
- E. Tyson Park

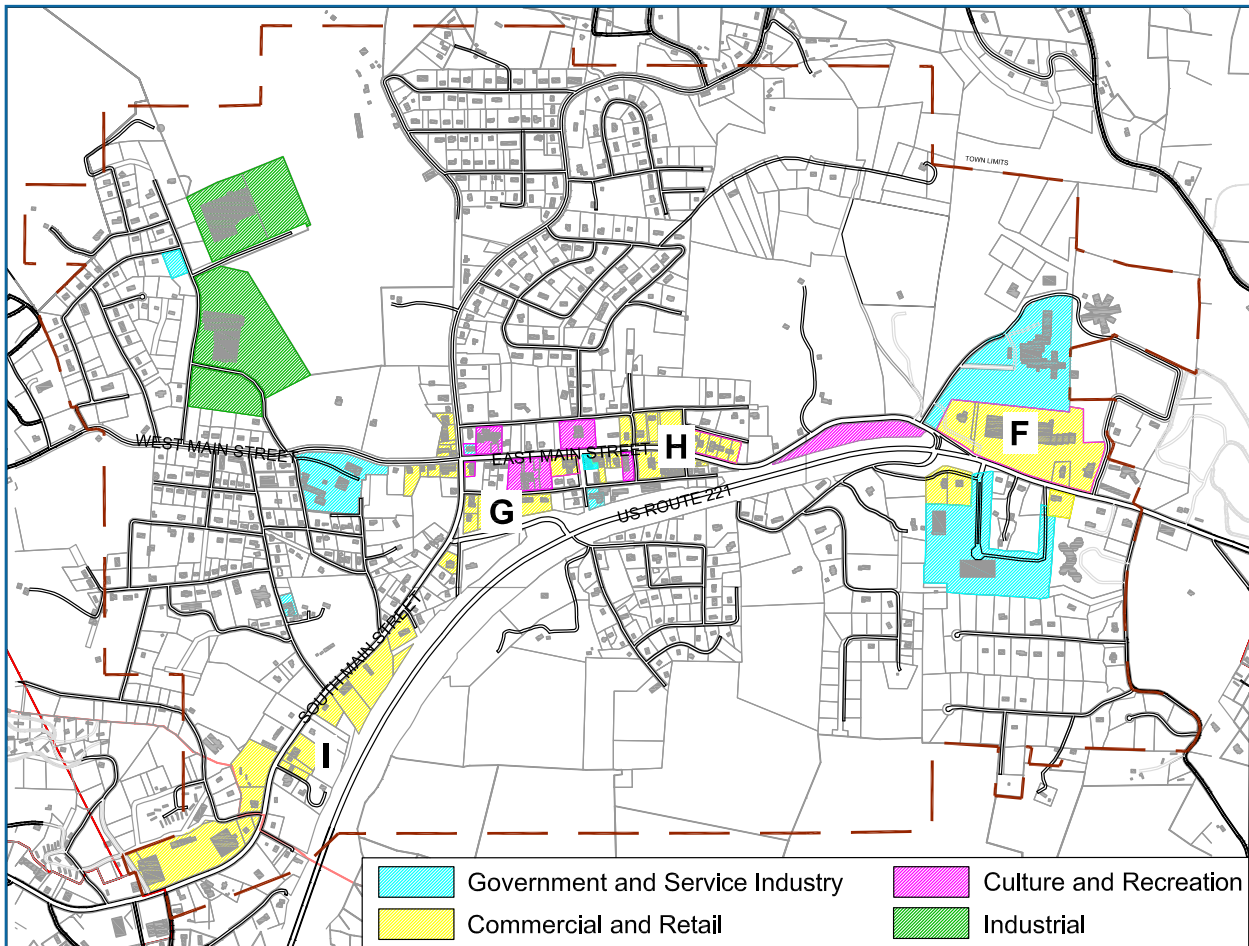


Map 2.4-a: High Use Pedestrian Paths



Major Retail/Commercial Areas:

- F. Mountain Village Shopping Center (US Route 221)
- G. Shamrock Square Shops (Long Street)
- H. East Main Street
- I. South Main Street



Map 4.2-b: Major Destination Areas

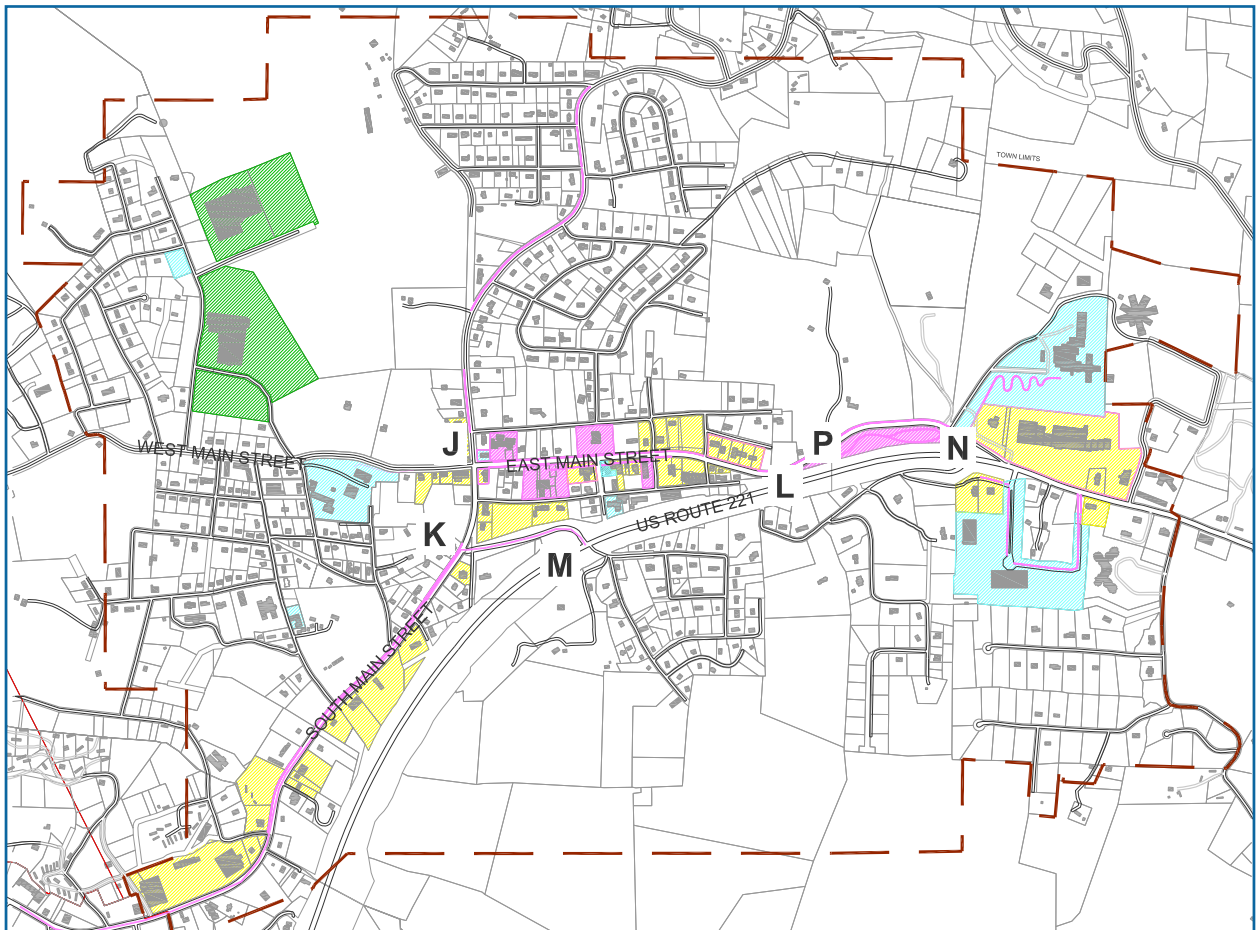
Identify Connectivity Issues:

- J. Intersection of East/West Main with North/South Main Streets
- K. South Main Street to Long Street
- L. Long Street to Mountain Village Shopping Center
- M. Academy Street across US Route 221 to Downtown



Concerns/Issues that affect Pedestrians:

- N. Intersection of East Main, Hospital Road and US Route 221
- O. Lack of crosswalks in Town
- P. Parking and pedestrian access to Tyson Park



Map 2.4-c: Connectivity and Pedestrian Concerns



Public Works Department

The Public Works Department maintains existing sidewalks and constructs new pedestrian facilities. The Public Works Department has identified several areas that require improvement to existing sidewalks. These improvements are of several different varieties; general repairs and the installation of ADA-compliant structures and devices. The majority of these areas requiring improvements are located in Downtown along East Main Street. North Main Street and South Main Street are also in need of repairs and the addition of new sidewalks.

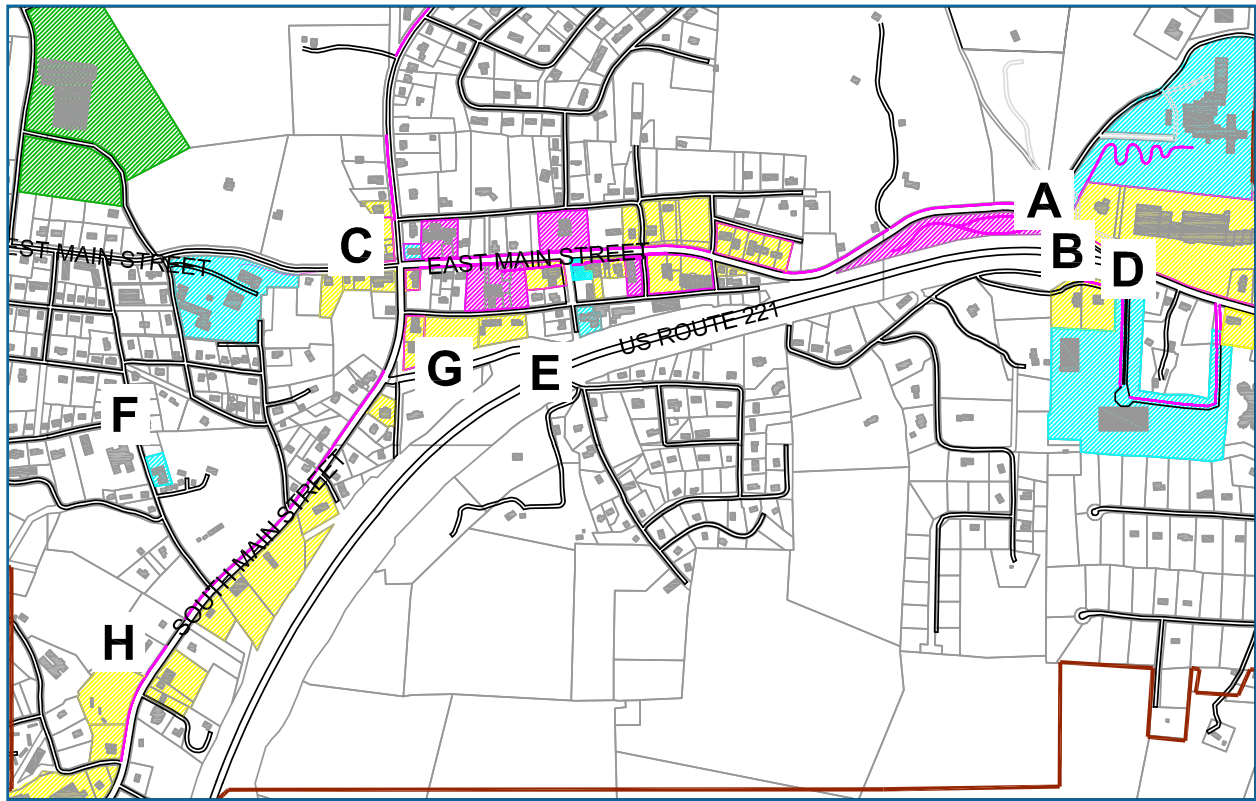


Cracked and broken sidewalk on East
Main Street

Police Department

The main concern for the Police Department is to ensure that pedestrian facilities are safe for all users. The top priority for the department is to make improvements at dangerous street intersections. In addition, the staff has noted other departmental concerns such as high traffic areas, no marked pedestrian crossings and a lack of sidewalks on specific streets. The following are areas of concern (See Map 2.4 - d. Enlarged map is in Appendix, pg. XII):

- A.** The intersection of East Main Street and Hospital Road
- B.** The intersection of East Main Street and US Route 221
- C.** The intersection of East/West Main Street and North/South Main Street
- D.** People crossing US Route 221 between the County Courthouse and the Mountain Village Shopping Center (no marked pedestrian crossing)
- E.** People crossing US Route 221 at Academy Street (no marked pedestrian crossing)
- F.** Lack of sidewalks on McConnell Street
- G.** Lack of sidewalks on Long Street
- H.** People crossing South Main Street to ethnic grocery
- I.** Lack of pedestrian crosswalks in the Town of Jefferson.



Map 2.4-d: Police Department Concerns

Safety should be a major factor in the enhancement of the walking community. Although it is impossible to prevent all injuries from occurring, countermeasures can greatly reduce the risk. The most significant pedestrian injuries occur when a motor vehicle is involved. According to the U.S. Department of Transportation, 85% of accidents where a pedestrian is hit by a motor vehicle traveling at 45 miles per hour or faster, are fatal for the pedestrian. Most pedestrian corridors travel parallel to a roadway or intersect with it at some point. It is important to recognize hazards and potential conflicts with the driving public, thereby mitigating the possible injuries. Pedestrian facilities should also meet the Americans with



Most pedestrian corridors travel parallel to a roadway which can be a safety hazard.



Disabilities Act (ADA) requirements. These pedestrian facilities should accommodate all users, including those with mobility impairment, sensory deficits or cognitive impairments. Due to the continual increase in the elderly population, sensory deficits, particularly partial loss of hearing or vision, are becoming more common.

2.5 IDENTIFY PRIVATE SECTOR CONCERNS/PERSPECTIVES

Residential and commercial developments have a major impact on the pedestrian environment. To develop an effective pedestrian plan, connectivity in residential neighborhoods and pedestrian connections to commercial developments helps to create a pedestrian network that encourages people to walk to a destination rather than use an automobile. In order to develop a more functional pedestrian network, the perspectives of the private sector were identified.

Downtown business owners understand that pedestrian traffic is an important component of successful businesses. The renovation of the historic 1904 courthouse will enhance the appearance of the downtown area and help create a new downtown destination. The private sector desires to continue the enhancement of pedestrian facilities to include pedestrian connections to residential areas, downtown parking areas and an aesthetically pleasing streetscape along Main Street.

Retail shopping centers are another private, commercial sector concerned with the development of a successful pedestrian system. The location of most grocery and retail chains, shopping centers are major destinations for a majority of the population. Usually placed along major vehicle corridors, shopping center are also major destinations for pedestrians. Commercial corridors such as US Route 221, have been noted as lacking in pedestrian facilities, which is a concern for the Town.



Miles of asphalt are not aesthetically pleasing to customers.



2.6 PEDESTRIAN SAFETY

Every year there are pedestrians, who are injured in automobile accidents. 4,641 pedestrians were killed in traffic accidents in the nation in 2004 and approximately 68,000 were injured. Many of the fatalities were due to unsafe conditions (such as poor surface conditions), inadequate signage or high traffic intersections. Fatality data indicates that the majority of vehicular-pedestrian accidents occur in parking lots. These accidents may be due to the lack of sidewalks for pedestrians to utilize. The National Center for Statistics and Analysis indicate that more than two-thirds of all pedestrian fatalities occur in urban areas; and in many urban areas, pedestrian accidents account for between 30 and 40 percent of all traffic fatalities. Almost half of fatal accidents involving pedestrians occur between the hours of 6:00 p.m. and midnight.



Conflicts between pedestrians and vehicles are common at parking lots.



The elderly are especially vulnerable in pedestrian/vehicle collisions.

Children between the ages of five and 15 have the highest rate of pedestrian injuries in the United States. A high rate of child injuries can be partly associated to the uneducated pedestrians in this age group. North Carolina does not follow the national trend; here, adults between the ages of 30 and 39 have the highest percentage of vehicular-related pedestrian accidents. The elderly population also has a high number of pedestrian injuries and is more likely to suffer fatalities from vehicular-related injuries than other age groups. The fatality rate for the elderly population is nearly *double* when compared to people in other age groups; and it will continue to grow in number due to baby boomers reaching retirement age.



2.7 STREET AND HIGHWAY SYSTEM ACCESS

Many of the streets and roads in Jefferson were originally designed to meet NCDOT standards, which is typical of our State's smaller municipalities. Although many of these roadways were developed using NCDOT standards, the requirements have changed over the years.

More consideration is given to pedestrian design now than it was thirty years ago. Traffic calming devices and intersection treatments have been modified to create better traffic safety. And as mentioned earlier in this section, many of the intersections need marked crosswalks to meet current requirements. Other than special circumstances, the Town should continue using the current NCDOT standards. In some cases, topography, property lines or existing utilities may require deviation to meet minimum requirements. These exceptions should be evaluated on a case by case basis.

2.8 PEDESTRIAN SYSTEM ACCESS

There are few existing pedestrian corridors within the Town of Jefferson. East Main Street is one major corridor and North and South Main Street are the other major corridors. All of the existing corridors are missing areas of pavement along the route.

The main destinations for pedestrians in Jefferson are primarily the strip malls which have been developed over the past thirty years. These major destinations are for the most part, not served by the existing pedestrian system.

As with many towns and cities across the country, recreational walking trails have become a major component of a pedestrian system. Many of these facilities do not provide connectivity but are very popular due to the natural setting they offer. Tyson Park is an excellent example of such a facility. The park attracts many residents, who desire a walking experience that an urban sidewalk cannot provide.

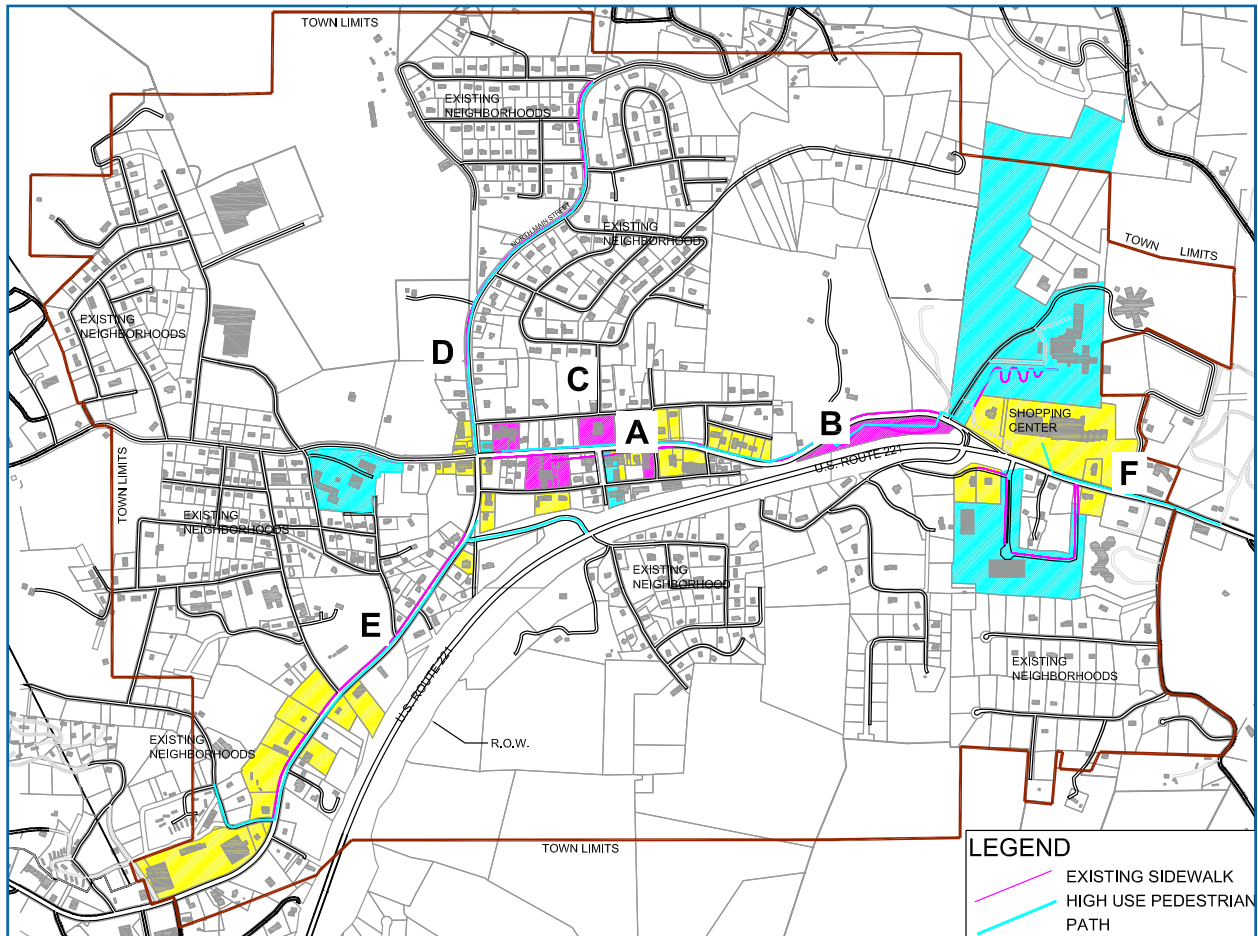
Walking trip characteristics

The main characteristic of the typical pedestrian's walking trip is the use of the sidewalks within the Town. As expected, the most widely-used sidewalk is located in the downtown district along East Main Street. Pedestrians park in one of the church parking lots on the



western end of East Main Street and walk to Tyson Park on the eastern end of the street. In addition the stretches of sidewalk along North Main Street and South Main Street are heavily used. All three streets have major connectivity problems with missing sections of sidewalk and unmarked pedestrian areas crossing parking lots. Other areas receiving high pedestrian use have no paved sidewalks; mostly along the US Route 221 corridor.

High Use Pedestrian Walking Areas: (Refer to Map 2.8-a. Enlarged map in Appendix, pg. XIII)



Map 2.8-a Existing Pedestrian Corridors

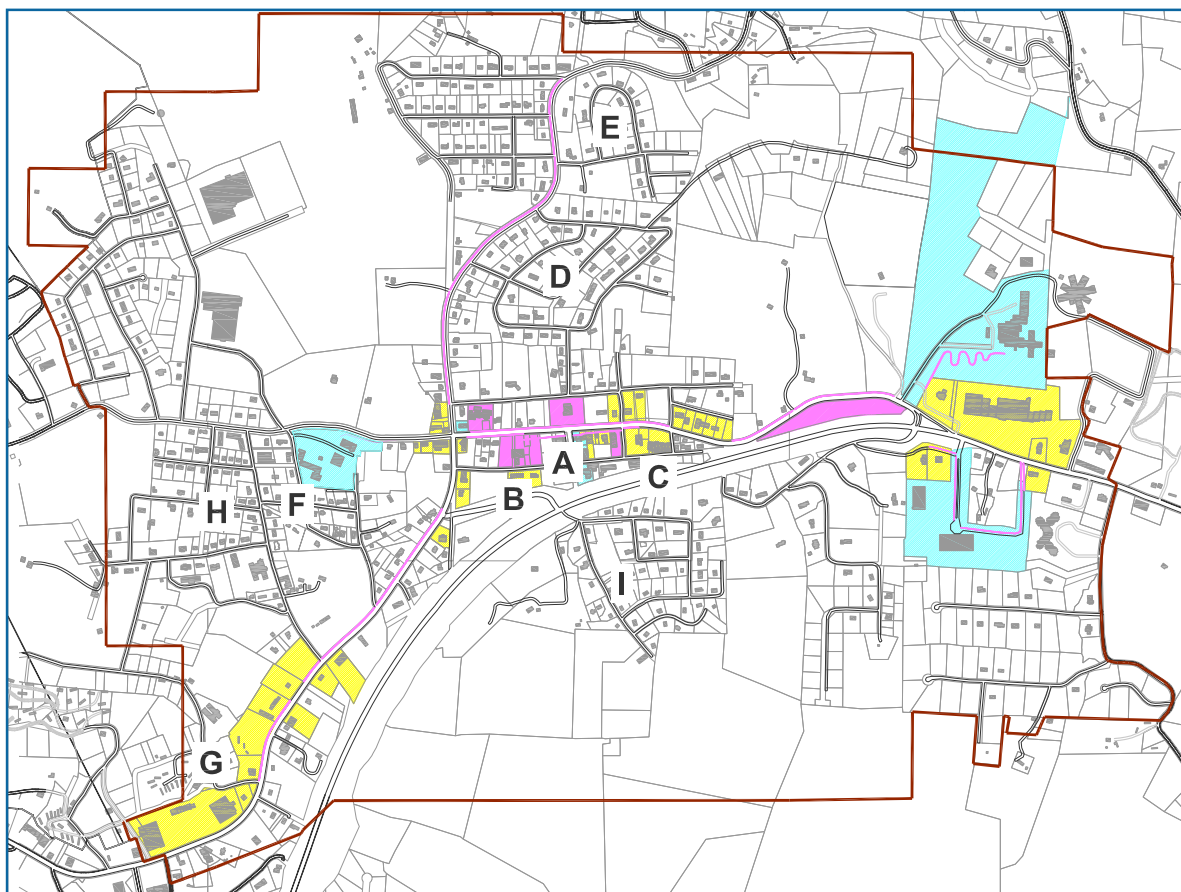
- A. East Main Street
- B. Tyson Park
- C. Ashe Street
- D. North Main Street
- E. South Main Street
- F. US Route 221 from the area around Wright Street to Mountain Village



Walking trips are typically broken down into two main categories; walking for recreation and health and walking to reach a destination (transportation). Many of those who are walking for recreation and/or physical activity, use East Main Street and the paved paths at Tyson Park and Ashe Memorial Hospital. The park and hospital facilities are in excellent condition and are very popular among community residents. Other primary users of pedestrian facilities are traveling to and from particular destinations such as shopping centers, specialty businesses and public buildings.

The main corridors of connectivity are along the Main Streets, North/South and East/West. These corridors pass through a variety of commercial, cultural and residential areas, often characterized by mixed uses. There are also major breaks in the connectivity of these corridors with missing sidewalks, a lack of crosswalks and safety hazards.

The shopping center located on US Route 221 is a pedestrian generator without any pedestrian facilities. There are many other public facilities and residential neighborhoods that need sidewalks and/or pedestrian crossings. These areas need pedestrian facilities as an alternative to vehicular transportation. (See Map 2.8-b. Enlarged map is in the Appendix, pg. XIV.) These corridors include:



Map 2.8-b: Additional Needed Facilities



- A. South Street
- C. US Route 221
- E. Cook Street neighborhood
- G. Badger Street neighborhood
- I. Academy Street neighborhood
- B. Long Street
- D. Martin Street neighborhood to Ashe Street
- F. Maple Street neighborhood
- H. McConnell Street neighborhood

2.9 INVENTORY AND ASSESSMENT OF EXISTING FACILITIES

The Town of Jefferson is committed to improving the opportunities for pedestrian transportation. The current pedestrian system in Jefferson consists primarily of sidewalks which were installed 20 to 40 years ago. The Town of Jefferson Steering Committee and McGill Associates underwent a process of creating a pedestrian facility inventory. This inventory delineates not only the location of existing sidewalks but also the condition of the facilities. Maps of existing facilities in the Town of Jefferson can be found at the end of Section 2. The maps are divided into the eastern and western sections of the Town. Not only do the maps delineate the conditions of existing pedestrian facilities, they also address barriers, crosswalk needs and the lack of accessible ramps. Major destinations areas such as business districts, schools and parks are featured in order to better understand the relationship of existing pedestrian facilities to their uses.

Visual Survey Results

Sidewalks

East Main Street

Annual Average Daily Traffic: 7,800
Vehicles

The major sidewalk corridor is along East Main Street in the downtown. This sidewalk runs for most of the length of East Main Street on the north side of the road. It begins east of the driveway entrance to the Ashe County Medical Clinic at the intersection with North/South Main Street and continues eastward to Hospital Road. There are two major gaps in this corridor: (1) the sidewalk does not meet the intersection of East/West Main Street and North/South Main Street and (2) just east of Cherry Street, the sidewalk disappears into an asphalt parking lot with no designated, safe, pedestrian pathway. Though this sidewalk is aged, it is mostly in good condition with a few cracked and broken panels



Lack of sidewalk continuity at corner of East/
West Main and North/South Main Streets



that should be replaced. The sidewalk has also sunk below the level of the curb in some places and poses a tripping and freezing hazard. The existing curb ramps are not ADA compliant. Where Cherry Street intersects with East Main Street, there is no curb ramp on the east side of the street and no pavement for about 10 feet. This sidewalk is heavily used, especially on weekends by recreational walkers headed to Tyson Park. There are no marked crosswalks at any point along this route.



Lack of sidewalk continuity across parking lot on East Main Street

There are also portions of sidewalk on the south side of the street, but the path is confusing and often seems to disappear completely. Sometimes the sidewalk is at curb side and other times it has been moved 10 to 20 feet back from the street and runs along the front of the buildings. The sidewalk disappears when it reaches the strip mall that houses the post office. The asphalt through the strip mall is painted to prevent vehicular intrusion into the area. There is one section of sidewalk along the western end which is crushed and broken and needs to be replaced.



Edge of paving along West Main Street

West Main Street

Annual Average Daily Traffic: 5,600 Vehicles

There is a small portion of paved sidewalk that climbs from West Main Street up to the mental health clinic. This pavement is now on private property and is scheduled to be removed. The businesses along West Main Street have paved parking lots that adjoin the roadway. There is no marked pedestrian corridor along this paving. NCDOT is currently evaluating a project to improve West Main Street (NC 88), but no decision has yet been made on how this will affect the businesses

or potential pedestrian path. NCDOT will partner with the Town of Jefferson in the construction of a sidewalk along this corridor.



North Main Street

Annual Average Daily Traffic: Unavailable

The pedestrian pathway that runs along the west side of North Main Street is a narrow pavement directly adjacent to the heavily traveled road. Portions of the path are concrete that are in poor condition and other portions are asphalt and delineated from the road only by a painted stripe. There are sections of paving missing from this sidewalk which causes pedestrians to walk in the very busy roadway. The pathway ends in a paved parking lot north of the Main Streets intersection. Though pedestrians can navigate along the unmarked parking lot, there is one section with a steep drop off which is non-ADA compliant.



Sidewalk on North Main Street with no separation from roadway

South Main Street

Annual Average Daily Traffic:
10,000 Vehicles

The South Main Street sidewalk begins at Badger Street in the south and runs north along the west side of the road. It ends a few hundred feet shy of the Main Streets intersection. Aside from the section missing at the Main Streets intersection, there is a large gap running along the front of a business office.



The sidewalk on South Main stops short of the North/South Main and East/West Main streets intersection.



Retaining wall on South Main Street obstructs the continuity of the sidewalk

The business has a retaining wall immediately adjacent to the roadway which is too narrow to allow for a sidewalk to be installed. This missing segment forces pedestrians to walk in the roadway of a four lane highway (Bus. 221) that is heavily traveled by vehicles. There is heavy pedestrian traffic along this street from the Badger Street area to a small ethnic grocery store and to specialty businesses on Long Street. Both destinations are on the opposite side of the street from the sidewalk and there are no marked pedestrian crossings.



Ashe County Government Center

Annual Average Daily Traffic: 15,000

When the new Ashe County Government Center was built in 2004, new sidewalks were installed along Government Circle. This sidewalk is in excellent condition. Pedestrians often cross US Route 221 from the Government Center to the Mountain Village Shopping Center (a major stop on the existing bus route). There is no marked pedestrian crossing at this point.



Intersection of US Route 221 and
Government Circle

Pedestrian Intersections

Crosswalk and signal needs are also shown on the Map 1 and Map 2 at the end of this section. There are many intersections that require pedestrian signals, crosswalks, areas of refuge, or a combination of these needs. The following are intersections and/or corridors that lack pedestrian facilities or are in need of improvements.

Existing Crosswalk Needs

- A. Intersection of North/South Main Street and East/West Main Street
- B. Intersection of East Main Street and Cherry Street
- C. Intersection of East Main Street and Ivy Street
- D. Intersection of East Main Street and Hospital Avenue
- E. Intersection of Academy Street and East Main Street
- F. Intersection of Academy Street and US Route 221
- G. Intersection of US Route 221 and Government Circle
- H. Across East Main Street to Tyson Park
- I. Across South Main Street to ethnic grocery store
- J. Across South Main Street to Long Street



The intersection of East/West Main and
North/South Main has no sidewalks or
crosswalks.



Existing Ramp Needs

- K. Cherry Street at East Main Street
- L. Ivy Street at East Main Street
- M. Academy Street at East Main Street
- N. Intersection at East/West Main Street and North/South Main Street
- O. Intersection of Tyson Park pathway and East Main Street
- P. Intersection of East Main Street and Hospital Road

Barriers

In addition to the sidewalks and curb ramps, the inventory delineates noncompliant sidewalks and sidewalk obstacles. Although many of the existing sidewalks are in good condition, there are non-compliant sidewalks. These areas consist of walks which require repair, replacement, ADA compliance, or have barriers.

Barriers consist of objects located on sidewalks which prevent a safe lateral clearance. Typical barriers consist of utility poles, traffic signs and fire hydrants. While these are not a problem along the existing sidewalks in Jefferson, there are some barriers. There are areas along the North Main Street sidewalk where trees and shrubs are intruding into the pathway, forcing pedestrians to walk in the roadway. A different type of barrier is in place along the south side of East Main Street. In several areas, the sidewalk is flush against the face of the buildings and adjacent to a parking lot without curb stops.

This can result in collisions between pedestrians and people emerging from buildings or with vehicles or doors intruding into the sidewalk area.



Doorways and vehicles intrude into the pedestrian space along this sidewalk.

The obstacles created by these barriers are difficult to resolve as compared to other tasks, such as repairing damaged sidewalks. Moving the sidewalk away from the building would necessitate the total reconfiguration of the streetscape and parking lots. There are solutions to these problems, such as widening the sidewalk thus providing adequate width for pedestrians or installing curb stops to prevent cars from intruding upon the sidewalk. But there are still drawbacks to these solutions, particularly in the downtown



district, where existing buildings and property lines can limit the width of sidewalks and parking lots. Therefore, it will be important to evaluate *all* the different options regarding sidewalk improvements.

Downtown Area

The only existing sidewalk in the downtown area of Jefferson is along East Main Street. This sidewalk is heavily traveled, especially on weekends. While much of the existing sidewalk is in good condition there are cracked and broken sections that need replacing. There are other areas that need to be moved or widened because of barriers due to location. There are also gaps in the sidewalk system along Main Street that need to be addressed. Other streets in the downtown area would benefit from the addition of sidewalks, especially Long Street. Ivy Street and South Street should also be considered for sidewalks as money becomes available.



Broken and spalled sidewalk in the downtown area.

- END OF SECTION -

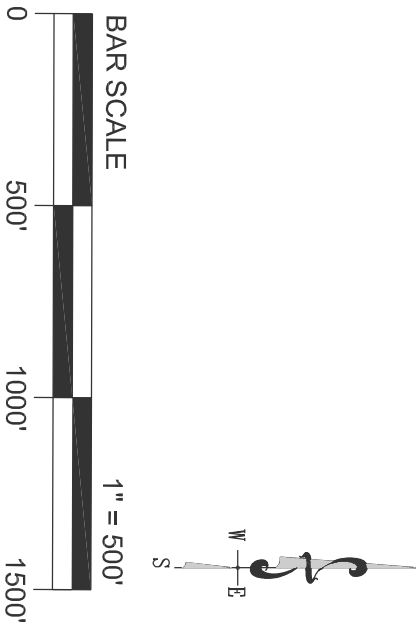
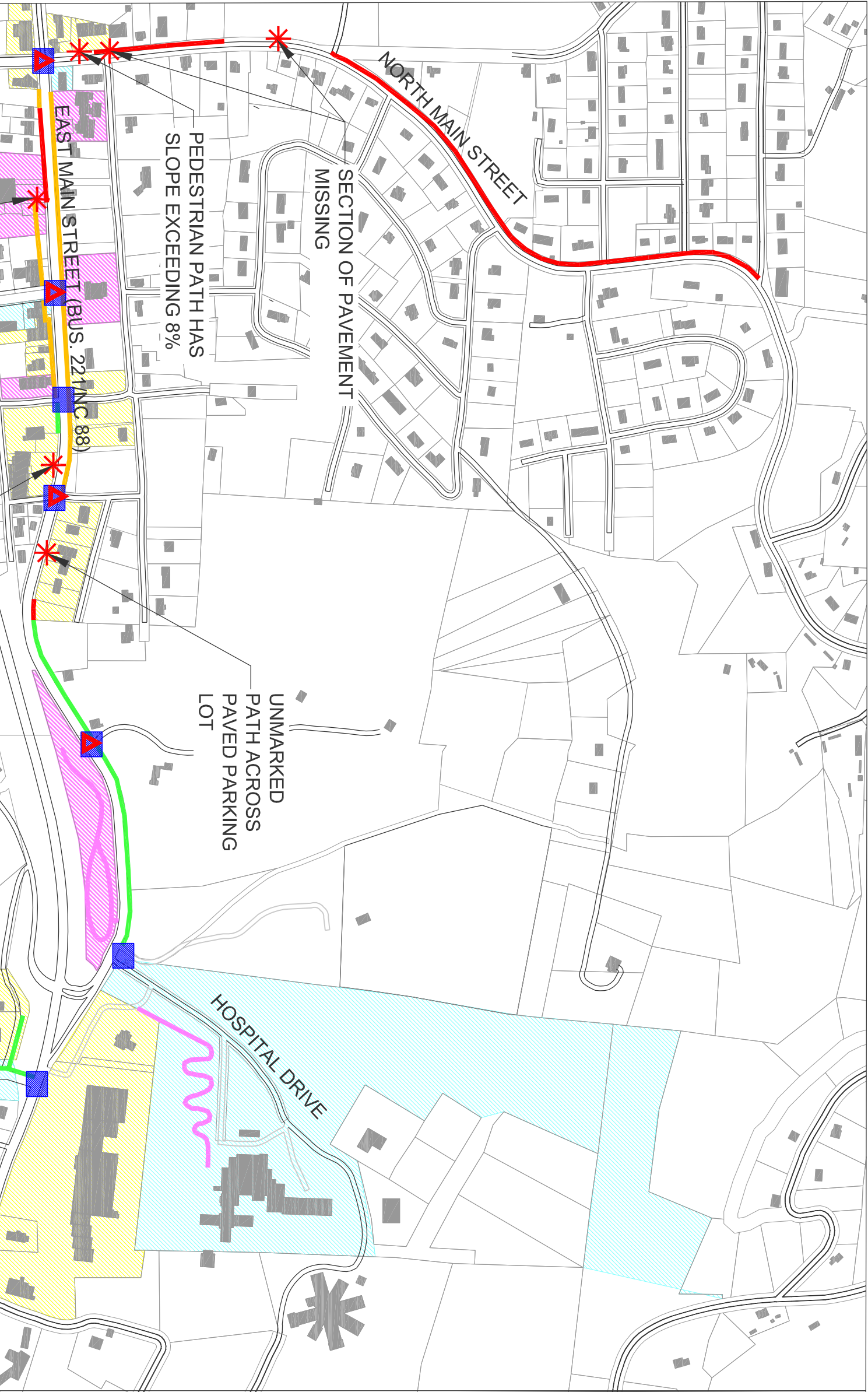
TOWN OF JEFFERSON

COMPREHENSIVE PEDESTRIAN PLAN

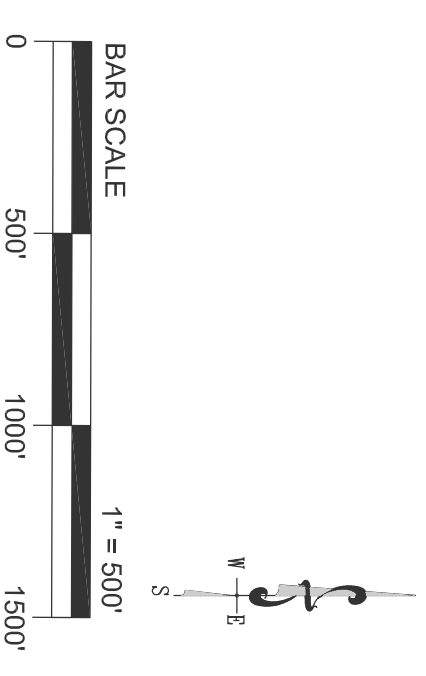
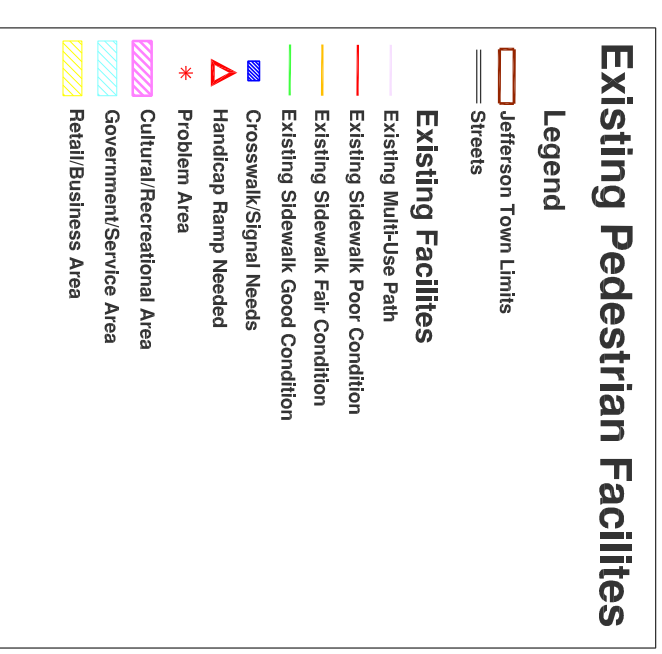
Map -1
Pedestrian Inventory Plan
Existing Conditions - East

Existing Pedestrian Facilities

- Legend**
 - Jefferson Town Limits
 - Streets
- Existing Facilities**
 - Existing Multi-Use Path
 - Existing Sidewalk Poor Condition
 - Existing Sidewalk Fair Condition
 - Existing Sidewalk Good Condition
 - Crosswalk/Signal Needs
 - Handicap Ramp Needed
 - Problem Area
 - Cultural/Recreational Area
 - Government/Service Area
 - Retail/Business Area



Map - 2
Pedestrian Inventory Plan
Existing Conditions - West





Section 3

Existing Plans and Policies

3.1 OVERVIEW

Numerous planning documents and recommendations have previously been prepared relating to issues addressing current and future pedestrian facilities for the Town of Jefferson. Such reports and documents are important efforts and need to be addressed and incorporated into this pedestrian plan. Many of these planning documents, which address transportation, public transportation, capital improvements and land use planning, provide valuable insight and background toward future decisions made for the Town. The following are key documents and studies, which should be reviewed in their entirety.

3.2 TRANSPORTATION PLANS

Projects within 2006-2015 NCDOT

The North Carolina Department of Transportation (NCDOT) Division of Bicycle and Pedestrian Transportation (DBPT) encourages comprehensive pedestrian planning by counties and municipalities statewide. DBPT coordinates its planning efforts with the Transportation Improvement Program (TIP), which is a state program that serves as a guide in establishing long-range goals for improving and implementing pedestrian transportation. As a result, the Town of Jefferson was awarded a grant in 2005 for the development of a Comprehensive Pedestrian Plan.

Transportation Improvement Program (TIP)

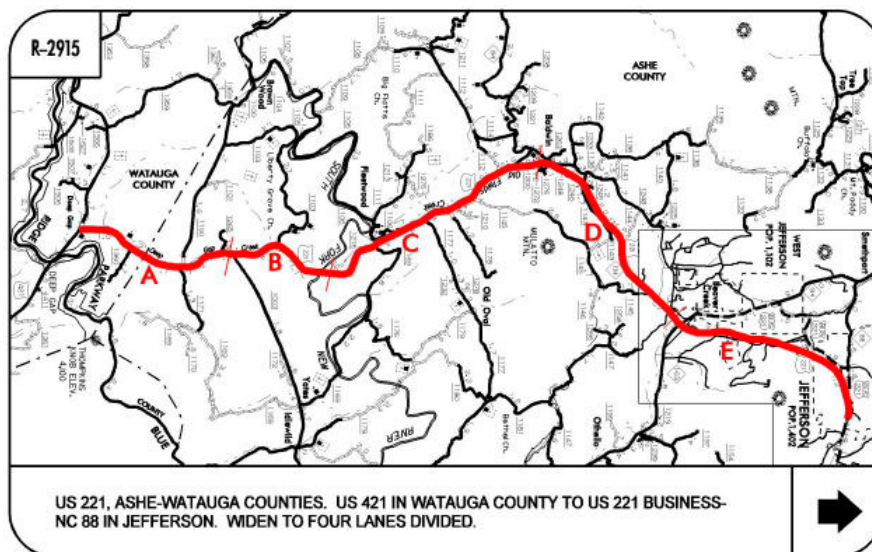
It is important to evaluate other existing initiatives of the Pedestrian Plan in order to appropriately incorporate current proposed improvements into the pedestrian plan. NCDOT has established priorities, which are addressed in the 2006-2012 Traffic Improvements Program (TIP). The Transportation Improvement Program (TIP) is a statewide program used as a guide for NCDOT in establishing long range goals for improving pedestrian transportation. A number of transportation, bridge and enhancement projects are being partially funded by TIP. The following projects are currently being planned and although long-range, should be taken into consideration in the formulation of the master pedestrian plan.



US 221 from US 421 to US Business 221 Jefferson

TIP Project ID# R-2915

Status: Planning/Design in progress; Construction to begin in 2013

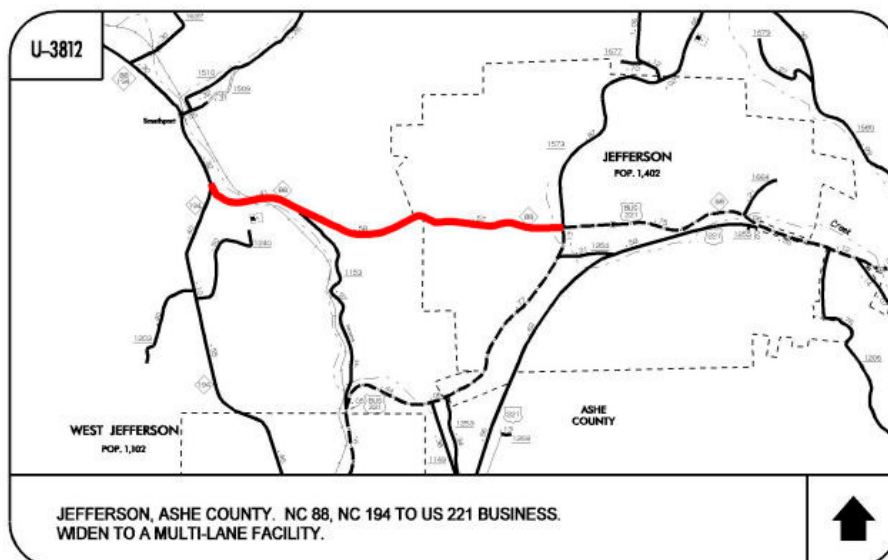


NCDOT Map

NC 88, NC 194 TO US 221 BUSINESS. UPGRADE EXISTING ROADWAY. (1.6 MILES)

TIP Project ID# U-3812

Status: Planning/Design in progress; Construction to begin in 2012



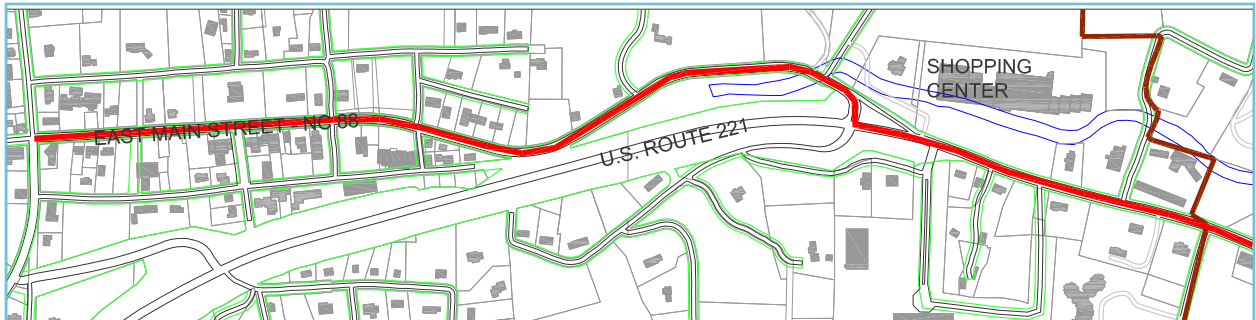
NCDOT Map



US 221-NC 88 IN JEFFERSON TO THE VIRGINIA STATE LINE. UPGRADE ROADWAY. (13.4 MILES)

TIP Project ID #R-4058

Status: Construction beyond 2015



NC 194 BYPASS IN JEFFERSON TO MOUNT JEFFERSON

Tip Project ID #FS-0111B

Status: Feasibility Study

No map available.

3.3 LOCAL PLANS AND INITIATIVES

The Bicycle and Pedestrian Planning Grant Initiative

The Division of Bicycle and Pedestrian Transportation has coordinated its planning efforts with the Transportation Improvement Program in the integrating of bicycle and pedestrian improvements. DBPT developed *The Bicycle and Pedestrian Planning Grant Initiative* in 2004 as a means of providing financial assistance to local municipalities in developing comprehensive bicycle and pedestrian transportation. In 2005, the Town of Jefferson was awarded a grant by NCDOT to develop a Comprehensive Pedestrian Plan. This grant program was developed by the DBPT and the Statewide Planning Branch (SWP) as a means of encouraging the development of comprehensive bicycle and pedestrian plans.

Ashe County Parks and Recreation Department

In 2006, Ashe County adopted a Comprehensive Parks and Recreation Master Plan. The plan calls for improvements to and the expansion of facilities in two County parks (Ashe Park and Family Central) that are within walking distance of the Town of Jefferson. This



program of improvements will positively affect the residents of the Town of Jefferson by providing new opportunities for recreation. The location of the parks near to Jefferson provides opportunities for a joint partnership between Ashe County and the Town of Jefferson for participating in the development of a greenway network that would link the Town to the parks. Ashe Park is located less than a mile north of the Town limits and Family Central is located a little more than a mile east of Town (further by existing roads).

Public Transportation

In addition to projects proposed within TIP, local public transportation is another entity offering an alternative to private, vehicular transportation. The Ashe County Transit Authority operates two different systems of public transport for the citizens of Ashe County. One system is operated on an 'as needed' basis: a client calls the Authority to schedule a trip and a route is worked out that will pick up all scheduled clients for a particular day. The second system is a 'fixed/deviated' route that runs between Jefferson and West Jefferson on a regularly scheduled basis. The route can be changed from day to day to accommodate 'as needed' clients. The regularly scheduled routes include apartment complexes, the hospital and shopping centers.

The Ashe County Transportation Authority (ACTA) promotes the use of public transportation. This system has been active for many years and is vital to many local residents as a means of transportation. The system provides an alternative mode of transportation that reduces the impact of private vehicles on the environment and road systems. In order to have a successful public transportation program, one needs a good pedestrian system.

3.4 REGIONAL PLANS

Blue Ridge National Heritage Area

The Blue Ridge Mountains and National Forest were identified in 2003 by Congress and President George W. Bush as the nation's 24th National Heritage Area. This "national heritage" in the western portion of North Carolina was earmarked as a developmental area where the natural resources must be preserved. The program offers funding for innovative projects that incorporate the preservation and protection of natural assets, while promoting the heritage of the area.



The Ashe County Heritage Council has developed the Ashe County Heritage Development Plan. The Plan contains 22 initiatives to encourage the protection of the County's heritage resources and to share those resources "in a responsible and environmentally favorable tourism development plan." (<http://www.blueridgeheritage.com/resources/images/RobBell/CountyPlans/AsheCountyHeritagePlan-Sept2006.pdf>). Several of these initiatives will have an impact upon the Town of Jefferson:

- 1904 Courthouse Building and Grounds Restoration. Located on East Main Street in the main business district of Jefferson, the old County Courthouse is undergoing renovations to turn it into a history museum focusing on Ashe County History and the Virginia Creeper Railroad. It is hoped that the site will also become a major tourist attraction in Ashe County.
- Welcome and Visitor's Center. The Chamber of Commerce is developing plans for a larger visitor's center. One possible location for the center would be in the downstairs of the historic 1904 Courthouse on East Main Street.
- Ashe County Farmers Market. The goal of this initiative is to expand the facilities at the existing market in West Jefferson, but also to research the potential of locating branch markets in other towns, including the Town of Jefferson.
- Historic Walking and Driving Tours in Ashe County. The Town of Jefferson has two sites on the National Historic Register, including the 1904 Courthouse.

If successful, these four initiatives will increase both the vehicular and pedestrian traffic in the Town of Jefferson. The main impact will be along East Main Street, as three of the initiatives are dependent upon the 1904 Courthouse. In addition, if the current parking location for the Courthouse is used, there will be additional traffic along Court Street, which has no sidewalks.

High Country Council of Governments, "Comprehensive Economic Development Strategy, 2007"

The "Comprehensive Economic Development Strategy, 2007" was developed by the High Country Council of Governments to aid member governments in planning for economic development. Several projects were identified that would have a positive impact upon economic development in the region. Of those, the following initiatives could have a positive impact upon the Jefferson pedestrian network:

- Upgrade existing water and sewer lines in the Town of Jefferson





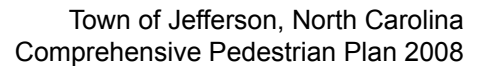
- Extend the Jefferson water/sewer line to
 1. The Bristol community
 2. The Smethport community
 3. Greensboro Manufacturing Road
 4. To potential Jefferson Industrial site
- Expansion of the Ashe County Airport
- Ashe County Park Improvements
- Central Family Park Improvements
- Renovation of Jefferson Town Hall

3.5 POLICIES AND INSTITUTIONAL FRAMEWORK

Funding for pedestrian improvements is of vital importance to the Town of Jefferson, from the planning stage to the final implementation. The proposed improvements will cost millions of dollars, funds that Jefferson cannot feasibly commit to providing up front. Developing creative financing that includes various funding sources such as grants, foundations and partnerships will help in the development and completion of successful projects. Powell Bill monies are particularly useful for pedestrian facilities. These monies are given annually to municipalities for roadway improvements such as spot repairs, paving, sidewalks and intersection improvements.

Requiring sidewalks in all new and redeveloped projects within the Town will reduce the future capital improvements for the Town of Jefferson. This should not only include residential subdivisions, but also commercial, industrial and other types of development. This requirement has become fairly prevalent among municipalities across the state of North Carolina. The guidelines addressing pedestrian facilities can be flexible in exceptional circumstances; but, they should not be adjusted to exclude the *intent* of the recommendations established for the Town. Certainly, any sidewalk proposed in this plan should be constructed by, or funds provided for by fee-in-lieu-of, by developers of the property.

Adding these guidelines to the local ordinances can be difficult. There are always differing views in any municipality on the responsibility of the developer verses the municipality. It will be important to build consensus among elected and appointed officials in order to have a development ordinance that is in the best interests of the Town of Jefferson and the surrounding community.





and accessibility limitations. The following are some basic topics that must be addressed for sidewalks to comply with ADA requirements.

ADA Topics

- *Overgrown, broken, root laden or otherwise rough conditions are not suitable*
- *Curb ramps provide entry and exit to sidewalks*
- *Ramps also provide alternate routes around staircases*
- *Cuts in medians at crosswalks allow travel across divided roadways*
- *Slopes must be realistic for traveling*
- *Ramps provide access to buildings that are not ground level*
- *Adequate width provides sufficient passing*
- *Historic district exemptions should be taken it account*
- *Adjusted crossing times allow for safe travel across wide intersections*

3.7 KEY FINDINGS FROM EXISTING PLANS AND POLICIES

The key findings for review of existing plans and initiatives are as follows:

- 1) NCDOT has improvement plans that could have a significant impact on the transportation system in Jefferson. It will be vital to incorporate pedestrian facilities in the planned improvements.
- 2) The County has several initiatives through the auspices of the Blue Ridge National Heritage Area which will positively impact the culture and economy of the Town of Jefferson. These initiatives will also increase the volume and type of vehicular and pedestrian traffic in Jefferson.
- 3) The Town of Jefferson should adopt regulations to require that sidewalks or a fee-in-lieu-of sidewalks be provided for all new developments, site plans and redeveloped sites.

- END OF SECTION -



Section 4

Pedestrian Network Plan

4.1 OVERVIEW

Based on the objectives established in Section 1, the evaluation of the existing conditions and community input in Section 2 and the review of existing plans and documents in Section 3, McGill Associates has prepared recommendations for a Pedestrian Plan for the Town of Jefferson. Section 4 describes these recommendations and proposals to expand and create a cohesive, safe and usable pedestrian network.

This section is separated into individual components including types of recommended facilities, specific recommendations, and users of the pedestrian facilities. The methodology used to develop the recommendations is described in Section 1.4, page 6.

Section 4 and the following sections will include recommendations, the establishment of priorities and implementation guidelines for the proposed pedestrian facilities. Section 4 outlines the proposed pedestrian network and identifies areas of need and areas of opportunity. Section 5 demonstrates guidelines for specific areas of concern in regards to pedestrian facilities while Section 6 outlines programs and policy proposals. Section 7 delineates priorities for development, time lines for the implementation of proposals and recommendations.

4.2 PEDESTRIAN NETWORK METHODOLOGY

As mentioned in previous sections of the Pedestrian Plan, the Town of Jefferson has pedestrian facilities in some areas, but also has many areas that need improvements. Section 4 identifies both general and specific areas that need to be addressed. 'Connectivity' is a recurring theme within this portion of the comprehensive plan. Connecting pedestrian facilities to form a network of sidewalks and multi-use trails is a long-range project that requires extensive time, funding and patience.

To create and develop a practical and feasible pedestrian transportation system for the Town of Jefferson, a network of pedestrian-friendly facilities should be implemented. The system should be part of the urban fabric of the Town, with the essential element being 'connectivity' that will allow pedestrians to reach their destinations. The pedestrian system must also be safe for users. If pedestrians have to risk their lives in order to walk or bike to a destination, they will choose to travel by a different mode of transportation. The pedestrian network needs to be safe and accessible for all users.





In addition to connectivity, repairing existing dangerous pedestrian areas is also a major concern with the system. Hazardous areas are priorities that need to be addressed immediately. The safety of pedestrians is one of the main concerns of the Town of Jefferson. As new projects are developed, connectivity and safety should be among the primary goals and objectives.

A number of factors were used to develop the pedestrian recommendations. The previous sections describe topics such as community input and planning documents that were used as information sources. In addition, the Steering Committee, Town staff input, and field work were also in integral part of the plan development.

Jefferson Pedestrian Plan Input

- *Input from community workshop*
- *Input and recommendations from Steering Committee*
- *Site visits*
- *Review of existing planning documents*
- *Evaluations of existing pedestrian facilities and gaps*
- *Evaluation of pedestrian trip generators and destination areas*

Based on Community input, Steering Committee input and existing conditions, several goals and objectives were established as a guide for recommendations. The following are the predominate themes that guided the development of the proposals:

- Increase connectivity from residential to destination areas
- Improve existing conditions and expansion of the pedestrian system in the downtown areas
- Improve and repair existing non-compliant ADA pedestrian facilities
- Implement safe conditions for pedestrians at dangerous conditions
- Future development should be taken into consideration in regards to pedestrian facilities
- Connectivity of pedestrian facilities where gaps and barriers exist



4.3 RECOMMENDED PEDESTRIAN FACILITIES

Numerous methods are involved in developing recommendations and proposals for the Jefferson Pedestrian Plan. The process can be broken down into basic tasks, as follows:

- Demographics and Population Trends
- Existing Facilities
- Needs Inventory
- Goals and Recommendations
- Implementation

Contained in each of these tasks is detailed information used to help develop and justify the proposals within the total document. Numerous meetings and site visits were conducted to better understand the needs and issues regarding pedestrian improvements. The proposals for ADA compliance and safety concerns are typical of most pedestrian plans. In addition to these *general* recommendations, the document identifies and makes proposals regarding issues that are *specific* to the Town of Jefferson.

Many of the general proposals recommend connectivity, repair of existing facilities and enhancement of future improvements; however, many of the future projects may not be facilities such as sidewalks or multi-use trails. Rather, the proposals may be goal-oriented: establishing creative partnerships, instituting safety programs and coordinating special events. Proposed programs such as these will promote pedestrian use within the Town, but are not project based recommendations. Other ancillary facilities are street furniture, landscaping and bus shelters.

The Pedestrian Plan proposes a basic network of non-vehicular corridors. These corridors will allow residents and visitors the opportunity to use alternative transportation methods. The network will consist of both existing corridors and new corridors. Many of the existing pedestrian facilities within the Town are in need of repair or improvement. The Town has made improvements over the years, but there are still areas in need of improvements. Map 1 (East) and Map 2 (West) – Existing Pedestrian Facilities, which delineate the existing conditions, can be found at the end of Section 2.

Pedestrian Crossing Projects

There are numerous unsuitable pedestrian crossings that have been identified in Jefferson. Currently pedestrians are faced with numerous barriers and gaps in several areas of





the Town. The solutions for these conditions range from striping crosswalks at traffic intersections to pedestrian signals at high volume traffic areas. Correcting dangerous intersections will not only encourage pedestrians to use the facilities but also reduce potential injuries. These areas of concern were identified through field observation, public input and steering committee input. The following list is of intersections that are in need of improvement or spot repair. Intersection improvements are areas that consist of major improvements that may include pedestrian signals, traffic signals or intersection reconfiguration. Spot Improvements include minor changes that may consist of crosswalk striping, sidewalk repair, removal of barriers or the installation of an accessible ramp.

Intersection Improvements:

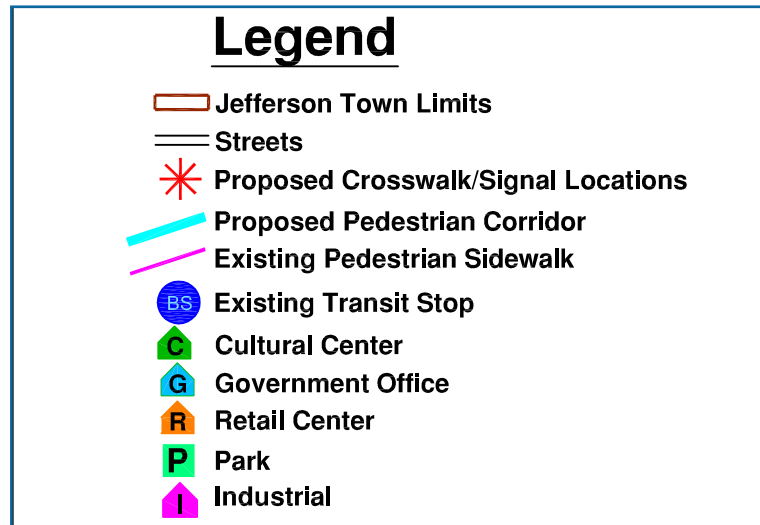
- East/West Main and North/South Main
- US Route 221 and Government Circle
- US Route 221 and East Main Street
- US Route 221 and Academy Street

Spot Improvements:

- East Main Street at Ivy Street
- East Main Street at Cherry Street
- East Main Street at Academy Street
- East Main Street at Tyson Park parking lot
- East Main Street at Hospital Road
- Hospital Road
- South Main Street near Badger Street
- South Main Street at Long Street
- West Main Street at McConnell Street
- West Main Street at Northwest Street

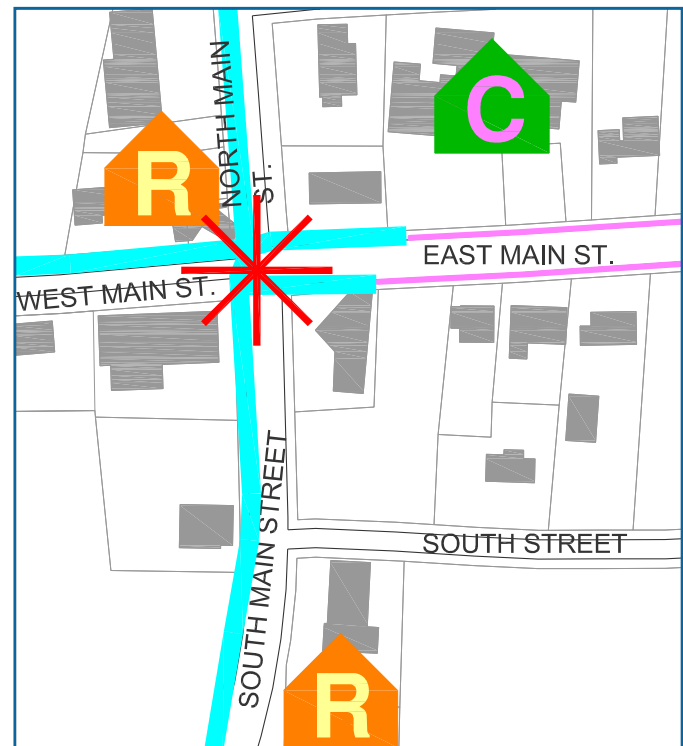


Legend for the following maps:



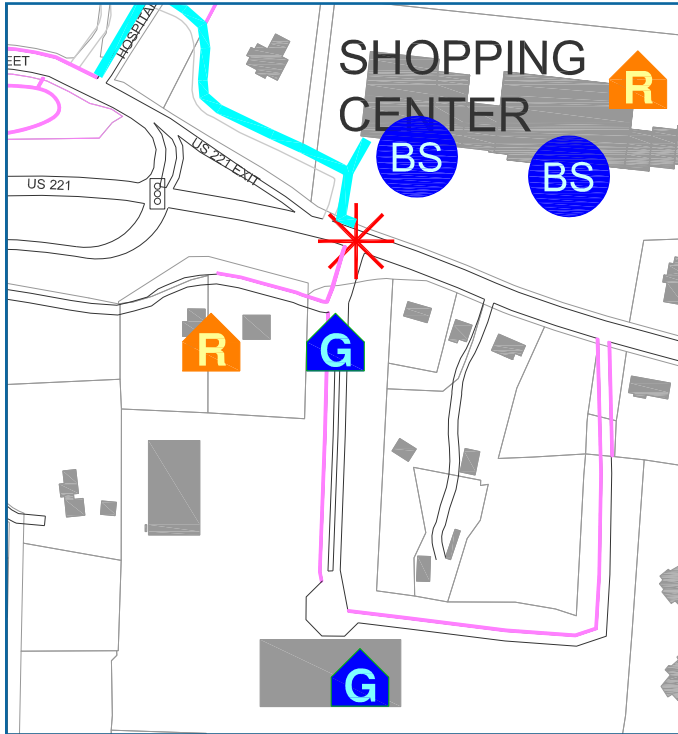
East/West Main Street and North/South Main Street (Business US Route 221 and NC 88)

This is an intersection of two of the major routes through the Town of Jefferson. This intersection receives a high volume of traffic. It is also where the three major pedestrian corridors of Jefferson stop just short of connecting to each other. In order to create a cohesive pedestrian network, it will be necessary to make improvements to this intersection to ensure the safety of pedestrians.





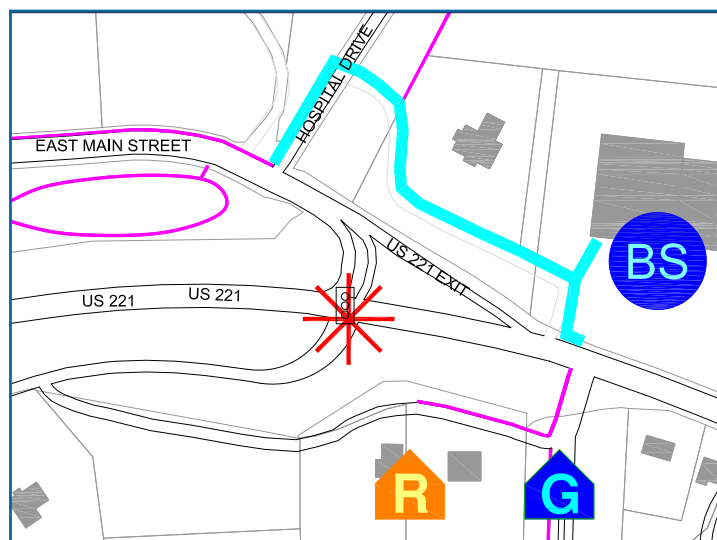
US Route 221 and Government Circle



Pedestrians are currently crossing US Route 221 at a location where there are no traffic control devices, traveling between the shopping center and the County Government Center. As US Route 221 is a major transportation route, averaging 12,000 to 15,000 vehicles per day, this is a very dangerous situation. Major improvements are needed at this intersection. At the very least, a pedestrian signal system is needed. It is possible to reroute pedestrians down to the intersection of US Route 221 and East Main Street, where a traffic signal already exists, but it is problematical that pedestrians would walk that far out of their way to cross the street, when they are already avoiding this intersection.

US Route 221 and East Main Street

Pedestrians living and working on the South side of US Route 221 need safe access to the bus stop, businesses and medical facilities on the North side of US Route 221. There is already a stop light at the intersection of East Main Street (Bus 221) and US Route 221. If a pedestrian signal crossing were added to the traffic signal at this location, it would greatly improve the safety of pedestrians crossing at this point. The speed of vehicles exiting US 221 onto East Main Street is a

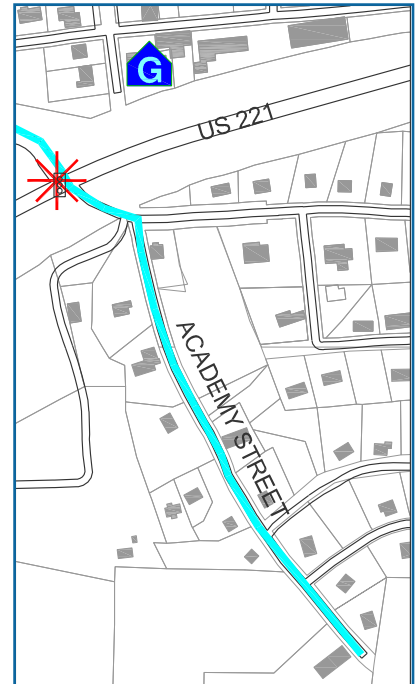




major concern for pedestrian safety as is the number of traffic lanes that have to be traversed to safely reach East Main Street or the shopping center. It is recommended that the Town of Jefferson work with the NCDOT to solve this dilemma. People are going to cross US 221 in order to access needed services (bus, hospital, government, shopping), it is vitally important to design a pedestrian corridor that will allow this to happen in the safest, most easily accessible manner. If the corridor is not easily accessible, it will not be used.

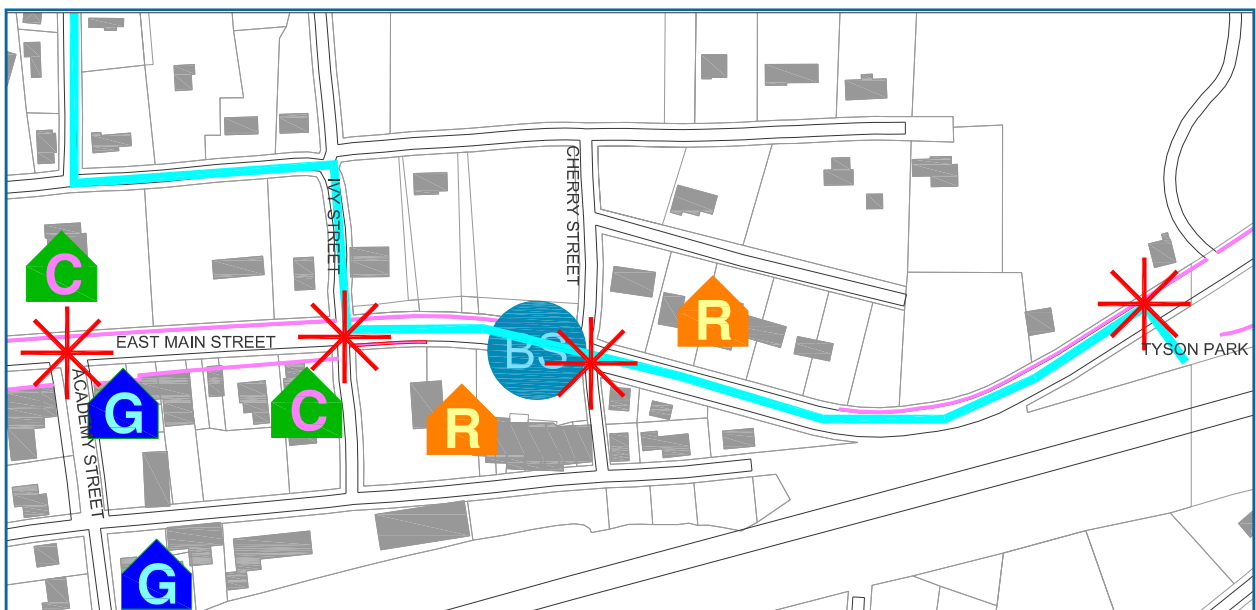
US Route 221 and Academy Street

US Route 221 has an average vehicle count of 12,000 per day near this location. There is already a stop light at the intersection which assists pedestrians trying to cross US Route 221. Further improvements, such as a pedestrian signal, would help to ensure the safety of the pedestrians at this dangerous intersection.



East Main Street at Academy Street, Ivy Street, Cherry Street and Tyson Park.

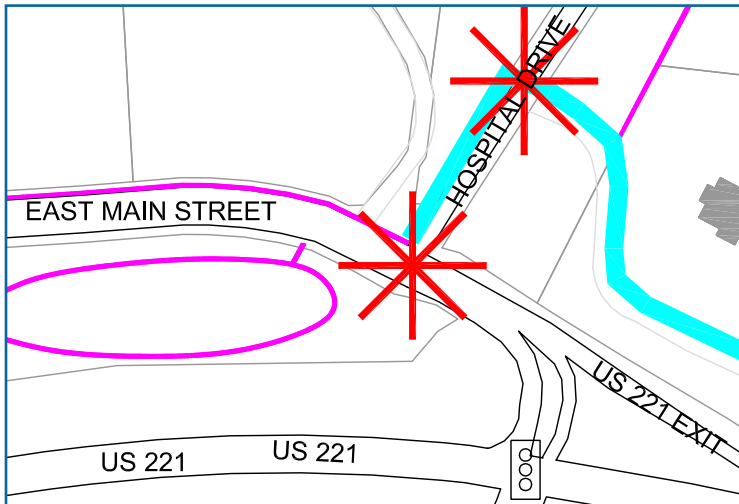
East Main Street is the main street through the business, cultural and government section of Jefferson. It averages 7,800 vehicles per day. The Old Courthouse across from





Academy Street is being renovated as a museum which will increase pedestrian traffic. Ivy Street is proposed as a pedestrian route from the northern residential neighborhoods to East Main Street and Tyson Park. Cherry Street is a proposed bus stop and has two strip malls located at its intersection with East Main Street. Tyson Park is a major pedestrian destination that is located across East Main Street from the existing sidewalk.

East Main Street at Hospital Road and Hospital Road



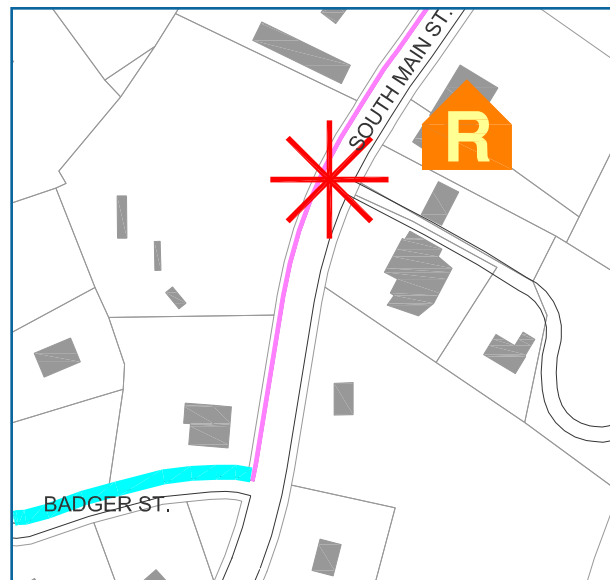
The community has expressed the need for improvements at the East Main Street and Hospital Road intersection. The area is a high volume traffic generator and also a major corridor for pedestrians. Establishing pedestrian signals at this intersection would allow pedestrians to cross the road in a safer manner.

Because of the large culvert placed at the intersection, the pedestrian route from East Main

Street to the Mountain Village Shopping Center needs to travel up Hospital Drive before crossing Hospital Road to the shopping center. A crosswalk should also be installed at this location.

South Main Street near Badger Street

There is a small ethnic grocery store on the opposite side of South Main Street from Badger Street. This store is a very important destination for residents who live in the Badger Street neighborhood. Since South Main Street is a four-lane highway with an average daily count of 10,000 vehicles, crossing this street at an unmarked crossing creates a safety hazard. A marked crosswalk

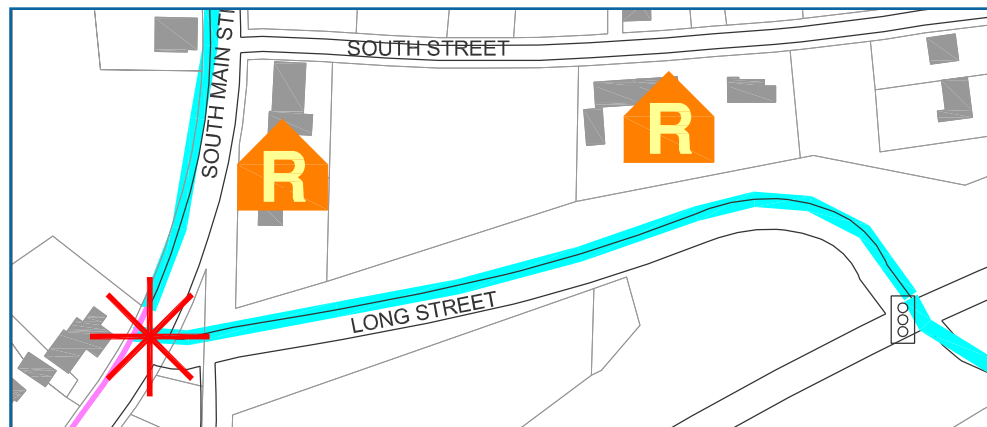




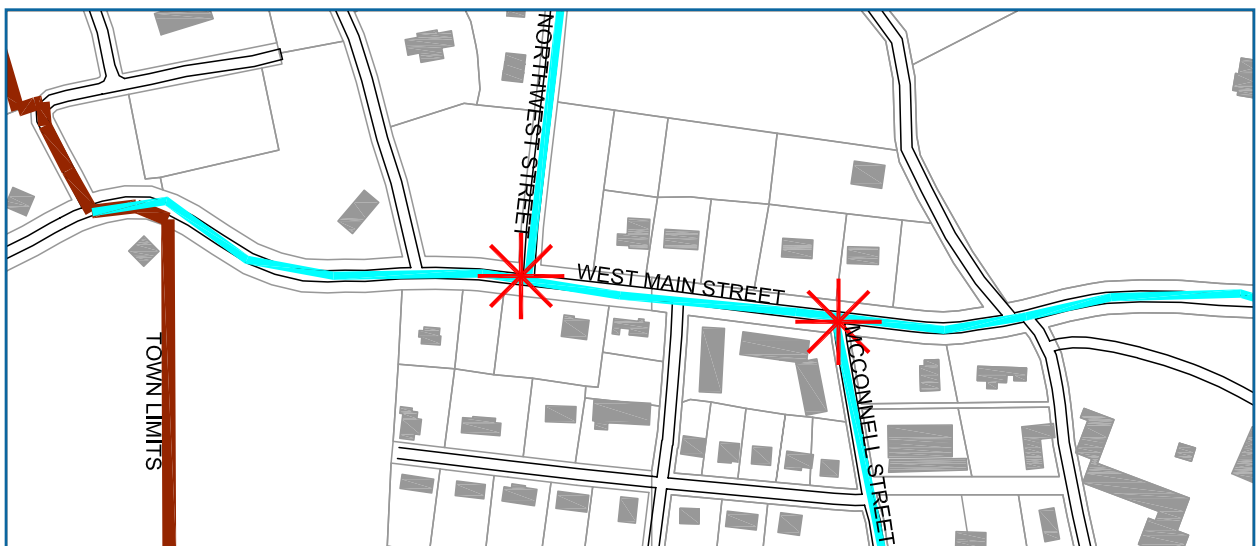
alone will not ensure pedestrian safety along this major vehicular artery. The Town of Jefferson and the NCDOT need to work together to provide a safer means for crossing at this point. A possible solution would be the installation of a refuge island.

South Main Street and Long Street

The pedestrian corridor proposed to traverse Long Street will have to be connected to the sidewalk corridor on the opposite side of South Main Street. Since South Main Street (Business US Route 221) is a four-lane highway with a high volume of traffic, for safety, it will be necessary to do more than place a marked crosswalk at the intersection (see Section 5.2 Marked Crosswalks).



West Main Street at McConnell Street and at Northwest Street





NCDOT is planning major changes to West Main Street (NC-88). This will increase the amount of traffic that travels on this main artery that divides two major residential areas. If proposed sidewalks are installed along both sides of West Main Street and along Northwest Street and McConnell Street, it will be important to have marked crosswalks to enable people to access these new pedestrian corridors, safely.

Sidewalk Projects

Sidewalk projects primarily range from replacement of unsuitable facilities to implementation of new sidewalks for connectivity to destinations or existing sidewalks. By implementing these recommendations, the Town of Jefferson can provide a more safe, accessible, and usable pedestrian network. Improvements are intended to connect to areas of high pedestrian volume such as parks, commercial/retail centers, government/service centers, cultural amenities and the existing sidewalk network. All sidewalks, whether existing or proposed should have marked crosswalks and curb ramps at intersections and driveways as a minimum requirement. Intersections where there is a high volume of vehicular traffic should possess pedestrian traffic signals. These facility improvements should also be evaluated as future widening and roadways projects are constructed.

Sidewalk Projects should include the following pedestrian facilities:

- *Sidewalks a minimum of 5' in width*
- *ADA compliant curb cuts and ramps at all driveways and intersections*
- *Marked crosswalks at all intersections*
- *Pedestrian crossing signals at high volume traffic intersections*
- *Sidewalks on at least one side of street*

The current pedestrian corridors in Jefferson cover a limited area of the Town. The proposed corridors connect these existing corridors and extend into new areas to help create a cohesive pedestrian network for the Town. The plan calls for both the expansion of the existing network and the renovation of the portions needing repair and upgrades. Maps at the end of Section 4 show the location for the proposed sidewalk projects. Maps and a detailed outline describing the priority order and construction costs can be found in the Appendix.



Proposed Sidewalk Projects

North Main Street
West Main Street
Long Street
Ivy Street
Wiley Street
Martin Street
Hospital Drive
Badger Street

South Main Street
East Main Street
Ashe Street
Court Street
Hamilton Drive
McConnell Street
Academy Street
Northwest Drive

North Main Street

North Main Street is a primary pedestrian corridor between residential neighborhoods and the downtown area. The current pedestrian pathway is both incomplete and hazardous. A new five foot wide sidewalk needs to be constructed down at least one side of the roadway. For pedestrian safety, some type of physical or visual barrier should be created to separate the sidewalk from the roadway.

The Town of Jefferson and Ashe County should work together to extend this corridor out to Ashe Park.

West Main Street

As NCDOT is planning major improvements along this corridor, this is the time to develop plans for pedestrian improvements along this roadway. It is recommended that sidewalks be constructed along both sides of the roadway from the intersection of North/South Main Street, west to the Town limits. This new pedestrian corridor will link two major residential neighborhoods with the downtown area.

As this is a state road, NC-88, it is strongly recommended that the sidewalk be physically and visually separated from the roadway by means of curbing and landscaping.

South Main Street

South Main Street is both a major pedestrian and vehicular corridor for the Town of Jefferson. There is a raised curb sidewalk along most of one side of the street, but two,





rather long sections of sidewalk are missing. Where a retaining wall (see Section 2.9: South Main Street) interferes with the continuation of the sidewalk, the wall must be moved out of the right-of-way to allow for construction of a sidewalk. This is a very dangerous condition as it forces pedestrians out into the roadway, and it must be corrected.

The sidewalk along South Main Street ends approximately two blocks before the East/West Main Street intersection. This effectively disconnects a major pedestrian corridor from the downtown area. The sidewalk should be extended to the intersection and connect there to the other major pedestrian corridors of East Main Street, North Main Street and West Main Street.

Serious consideration should also be given to the idea of constructing sidewalks on both sides of South Main Street, especially if NCDOT schedules roadway improvements along this corridor in the future.

East Main Street

East Main Street is the major pedestrian and vehicular corridor through the downtown of Jefferson. Currently the pedestrian system is a mixture of sidewalks, asphalt parking lots and incomplete routes. The existing sidewalks vary in condition from poor to good. Sometimes the sidewalk is adjacent to the street, and at other times, it is so distant from the street that it creates confusion as to where the pedestrian pathway is located. The sidewalk is free of obstructions such as utility and sign poles.

East Main Street needs a complete and coherent pedestrian system. Sidewalks should be available down both sides of the street from the North/South Main Street intersection to Tyson Park and Hospital Drive. Pathways across parking lots should be clearly marked and separated from vehicles with both physical and visual cues such as change of material, landscaping and street furniture. If the sidewalk is removed more than 10 or 15 feet from the roadway, the pathway and its connections should be clearly marked so as to avoid confusion. Where the sidewalk is broken, spalled, sunken below the curb line or uplifted by roots or frost heave, it needs to be replaced in order to provide a safe walking surface.

The Town of Jefferson needs to consider improving the existing streetscape in the downtown by initiating a program of designed improvements that include landscaping, street furniture, lighting and way finding. The improvements can be made by the Town or by property owners, but it must be consistent. A consistent set of good design guidelines will create a unified and positive identity for the Town of Jefferson.



Long Street

Businesses along Long Street are a major destination for residents of Jefferson. There are currently no sidewalks along this roadway which is used by pedestrians coming across US Route 221 from Academy Street and along the South Main Street pedestrian corridor to the Mountain Village Shopping Center on US Route 221.

It is recommended that sidewalks be installed along the north side of Long Street to accommodate both current and future use by pedestrians. Long Street is the logical connector route between South Main Street and the proposed Jefferson Greenway along US Route 221.

Ashe Street, Court Street and Ivy Street

These three streets comprise part of an existing pedestrian corridor that runs from a major residential area to the downtown area. It is heavily traveled on weekends by pedestrians traveling in the roadway to the downtown and Tyson Park. With the installation of a museum in the 1904 Courthouse, this corridor has the potential to increase both pedestrian and vehicular traffic. It is recommended that a sidewalk be installed down at least one side of these streets from Martin Street to East Main Street. A crosswalk should be installed across Court Street from Ashe Street to the 1904 Courthouse property.

Wiley Street, Hamilton Drive and Martin Street

These streets make up the majority of roads in the residential neighborhood directly north of the downtown area. Residents from this neighborhood regularly walk downtown and to Tyson Park. It is recommended that a sidewalk be built along one side of the streets in this neighborhood.

Hospital Drive

In order to implement a cohesive pedestrian network in Jefferson, it will be necessary to connect the pedestrian corridors to the commercial district on the east side of Hospital Drive. There is a deep culvert immediately adjacent to the east side of the intersection between East Main Street and Hospital Drive which eliminates the possibilities for a pedestrian crossing at that point. It will be necessary to extend a sidewalk approximately 200 feet up Hospital Drive from the corner in order to install a pedestrian crossing. Since this crossing will not be at a marked intersection, additional safety measures such as pedestrian crossing signs, a pedestrian signal or a refuge island should be installed.





Badger Street

Residents along Badger Street regularly walk along this street to access the pedestrian corridor along South Main Street. A sidewalk should be constructed along at least one side of Badger Street.

McConnell Street

McConnell Street is a main access road through a neighborhood that contains residences and government and health service centers. A pedestrian corridor along this roadway would provide a connection between West Main Street and South Main Street as well as access to needed health and government services. A sidewalk should be installed down at least one side of McConnell Street.

Northwest Drive

Northwest Drive is a major collector street for the surrounding neighborhood which is a mix of residential and industrial uses. A sidewalk should be built on at least one side, the length of Northwest Drive. This will provide a connector to a major pedestrian corridor to be built along West Main Street, connecting this neighborhood to the downtown and commercial areas.

Greenway Pedestrian Projects

Greenway Corridor Projects include off-road pedestrian facilities, typically taking advantage of linear stream corridors, easements and other open space areas. Trails and greenways are very popular among residents and visitors. Visitors appreciate and often return to communities that provide places for bicycling and walking, safely removed from busy roads and streets. Trails offer scenic recreation opportunities suitable for a wide range of ages and abilities. These trails can have a tremendous impact on the economy, potentially providing additional tourist dollars. Where popular trails exist, lodging providers can encourage extended stays among their guests, thereby increasing occupancy. For residents, investment in trails and greenways can increase property values and improve the overall livability of a community. The following describes the benefits that can be generated from greenways:



Benefits of Greenways

- *Encourage people to enjoy the area from an outdoor perspective*
- *Provide opportunities for families to safely enjoy a healthy activity together*
- *Encourage walking or bicycling to locations within a reasonable distance, such as school, work and recreational areas.*
- *Enhance the safety and convenience of travel to many residential and commercial areas, recreational access sites and other points of interest.*
- *Provide benefits to all road users by reducing congestion and enhancing motorists' safety.*
- *Reduce parking congestion at popular destinations.*
- *Increase safe and affordable options for recreation and exercise, helping to improve the health of visitors and residents alike.*
- *Increase economic benefits such as increased tourism, higher property values, additional residential and business growth, and job growth.*
- *Encourage the conservation of stream corridors.*

Jefferson Greenway

The Jefferson Greenway will become a major corridor along US Route 221. For Jefferson, the focus of the greenway corridor will be to provide access to and connectivity between residential and commercial areas. The corridor was chosen based on existing and design-phase plans for construction along US Route 221. The Town of Jefferson should work with Ashe County and the NCDOT to expand this corridor to provide a link to West Jefferson in the west and to Family Central Park in the east.

Future Planning Efforts

Existing and future utility easements should be assessed to determine if they can be used for possible pedestrian connections. Town utility lines can create a network of connectivity to neighborhoods. The associated public easements should include recreation and alternative transportation as uses for the public right-of-way, allowing trails to be constructed in the future.





4.4 SPECIAL FOCUS AREAS

Many different users groups will make use of Jefferson's pedestrian facilities. A segment of this population will be visitors while the vast majority will be seniors, retirees and families with children that live and work in the Town. It will be imperative that new and existing facilities provide safe, pedestrian-friendly corridors for all users to navigate within the Town, particularly for senior adults and children.

Senior Citizens

Senior adults are special populations that need particular consideration in pedestrian projects. There are currently, two independent living and one assisted living residences for seniors in the Town of Jefferson. Seniors make up the largest population group in Jefferson. As the number of retirees in the Jefferson population continues to increase, the need for ADA compliant facilities will be even more imperative. In addition, senior adults typically have more time to walk after retirement. With the promotion of healthy lifestyles, this population will need safe pedestrian facilities offered by the Town. Special attention is needed to ensure a community where this segment of the population can safely traverse the streets.

Children

Children also require special safety procedures with regards to public safety. An equally important component in this equation is *safety education*. Many children are injured every year due to their lack of understanding of how to safely use sidewalks. Education programs such as *Safe Routes to School* should be promoted to assist children in learning how to cross a street and to walk in safe areas. Promoting healthy lifestyles for children will encourage physical activity and the use of sidewalks for exercise. The encouragement of walking is very important; but at the same time, the pedestrian facilities must also be user-friendly.

Hispanic Population

Jefferson and the surrounding community have a growing Hispanic population. This growing population is a growing user of the pedestrian system. The Comprehensive Pedestrian Plan recognizes the unique pedestrian patterns of this demographic groups and has taken their needs into account in the planning of sidewalks, crossings and greenways.

- END OF SECTION -

TOWN OF JEFFERSON

COMPREHENSIVE PEDESTRIAN PLAN

Map - 3
PROPOSED PEDESTRIAN NETWORK - EAST

Legend

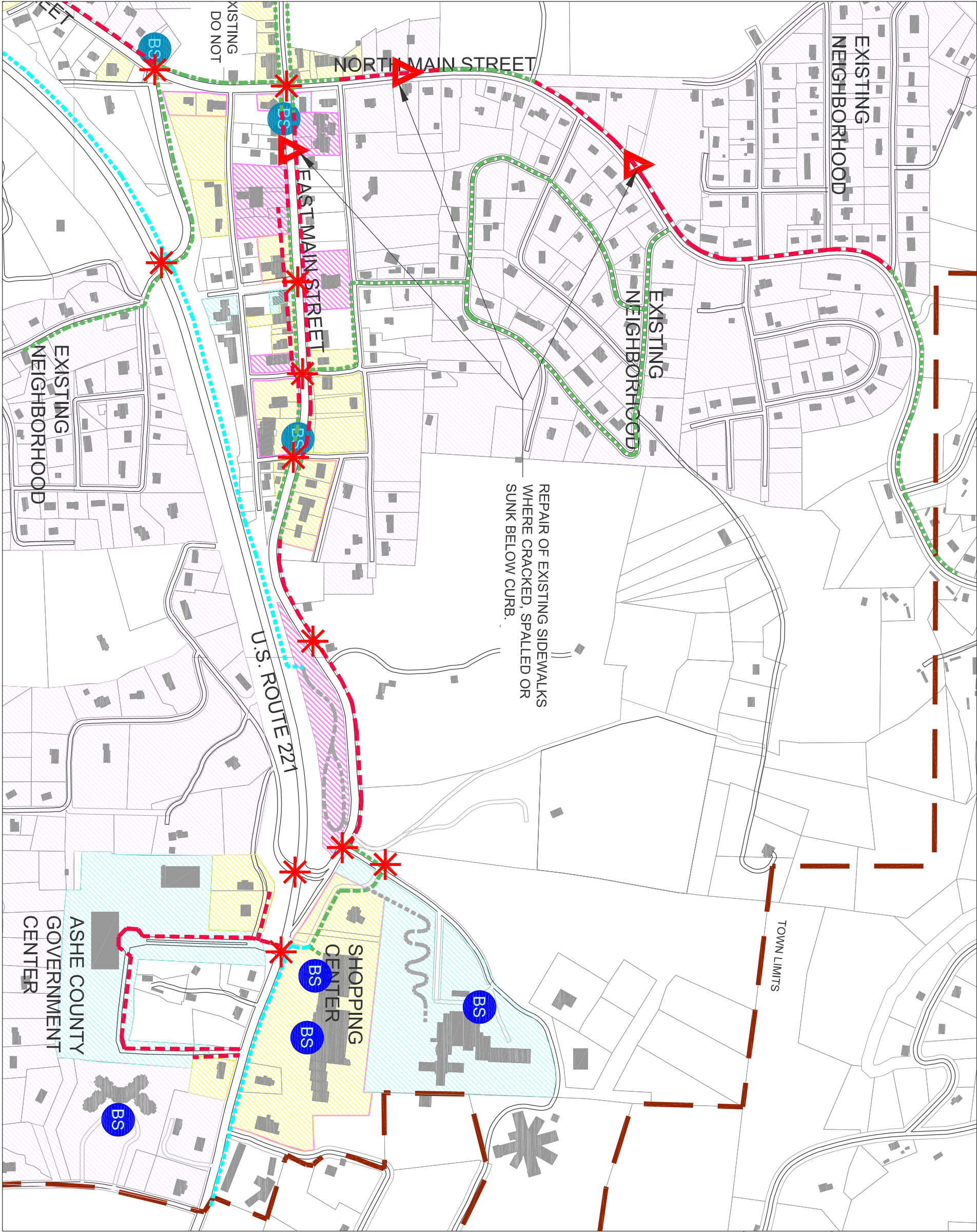
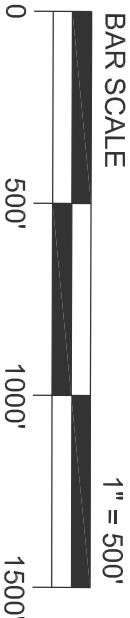
- Jefferson Town Limits
- Streets

Proposed Facilites

- Proposed Sidewalk
- Existing Sidewalk
- Proposed Multi-Purpose Trail
- Existing Walking Trail
- Proposed Crosswalk/Signal Improvements
- Existing Transit Stop
- Proposed Transit Stop
- Proposed Spot Improvements

Pedestrian Destination Points

- Cultural/Recreational Area
- Government/Service Industry
- Retail/Commercial Center
- Residential Area



TOWN OF JEFFERSON

COMPREHENSIVE PEDESTRIAN PLAN

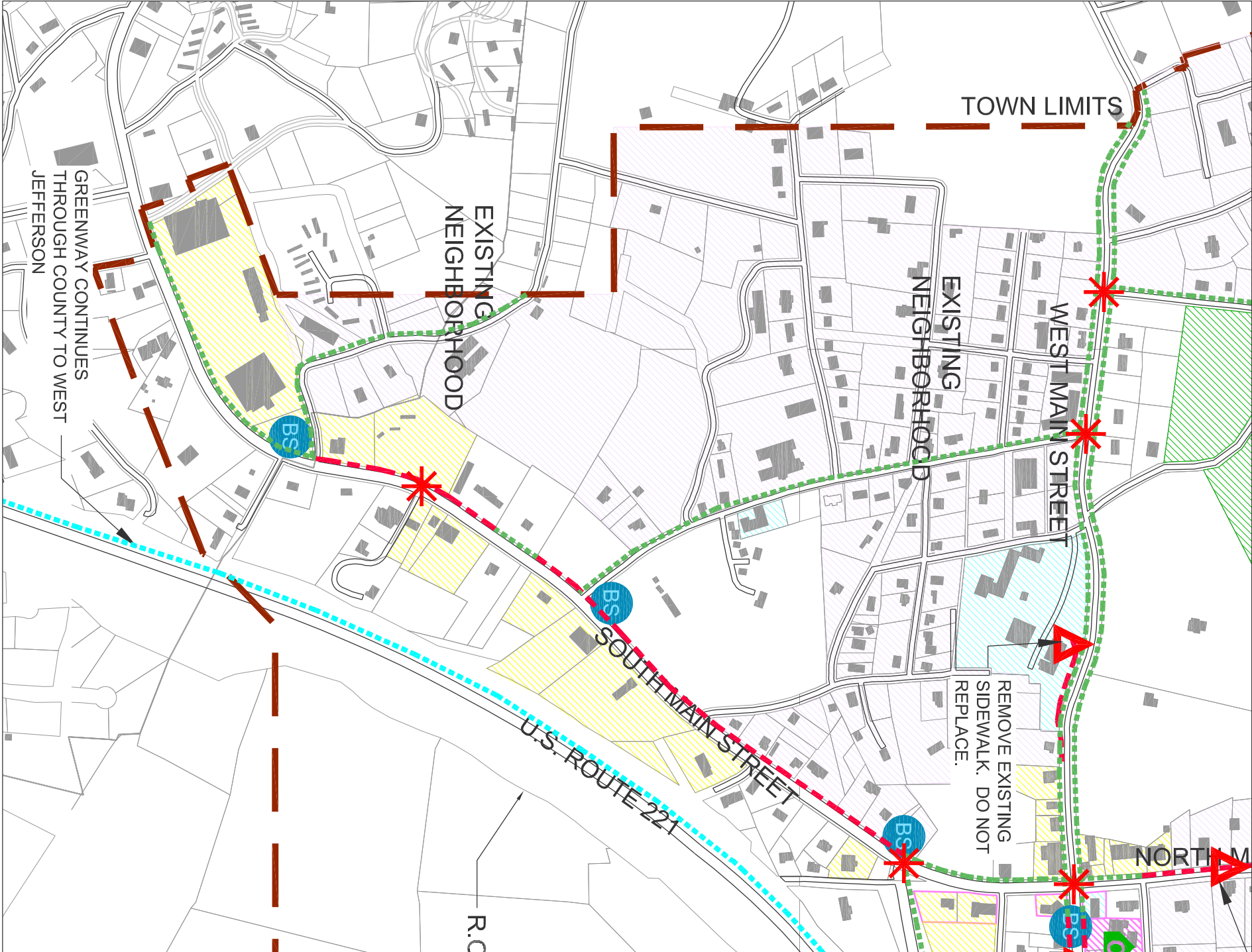
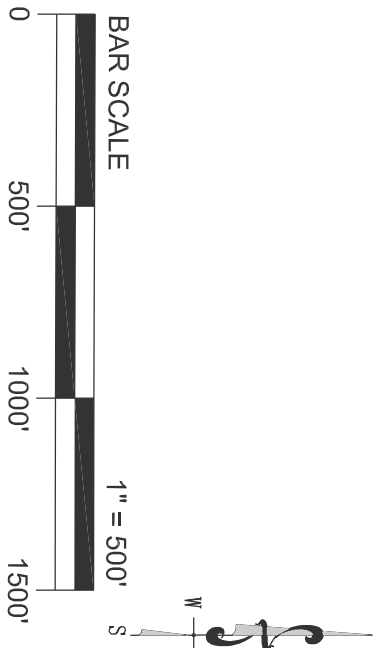
Map - 4
PROPOSED PEDESTRIAN NETWORK - WEST

Legend

- Jefferson Town Limits
- Streets
- Proposed Facilities**
 - Proposed Sidewalk
 - Existing Sidewalk
 - Proposed Multi-Purpose Trail
 - Existing Walking Trail
 - Proposed Crosswalk/Signal Improvements
 - Existing Transit Stop
 - Proposed Transit Stop
 - Proposed Spot Improvements

Pedestrian Destination Points

- Cultural/Recreational Area
- Government/Service Industry
- Retail/Commercial Center
- Residential Area





Section 5

Design Guidelines

5.1 OVERVIEW

The guidelines in the Pedestrian Plan were developed through assessment and documentation of existing practices that were observed or informed through site observation, community input or steering committee comments. National and state design standards as defined by the NCDOT, the Manual of Uniform Traffic Control Devices (MUTCD), the American Association of State Highway Transportation Officials (AASHTO), the Americans with Disabilities Act (ADA) and the Federal Highway Administration directly influenced the formation of these guidelines. If any discrepancies occur between the design guidelines and national and state standards, the national and state standards take precedence. Furthermore, cost estimates provided for proposed improvements are relevant only for the date in which this document was prepared. The Town of Jefferson should seek a current cost estimate for any proposed work from a qualified landscape architect or engineer before submitting the work for bid.

The following descriptions and typical details are intended to be used as design standards and alternative treatments for pedestrian facilities. The treatments are important and should be designed and constructed to meet the minimum standards for implementing a safe pedestrian and vehicular facility. Being that many of the local streets are NCDOT roadways, the Town should obtain the proper approvals and permits from NCDOT prior to implementing projects on subject roads.

5.2 PEDESTRIAN FACILITY ELEMENTS

Sidewalks and Walkways

Sidewalks make up the majority of pedestrian facilities and are the most important component of a pedestrian network. The number of pedestrians using a particular facility will determine which type of sidewalk should be implemented. Sidewalks are the primary connectors for residential areas, shopping centers and businesses. They create opportunities for people to meet and socialize. They provide places for children to play and adults to exercise. They provide an alternate means for people to access commercial and business areas.

Most of the new sidewalks located in Jefferson will be five feet in width, thereby providing an adequate facility for pedestrians to walk to their destinations. Where adequate right-of-way is available, a buffer can be utilized in order to separate the sidewalk from the roadway.

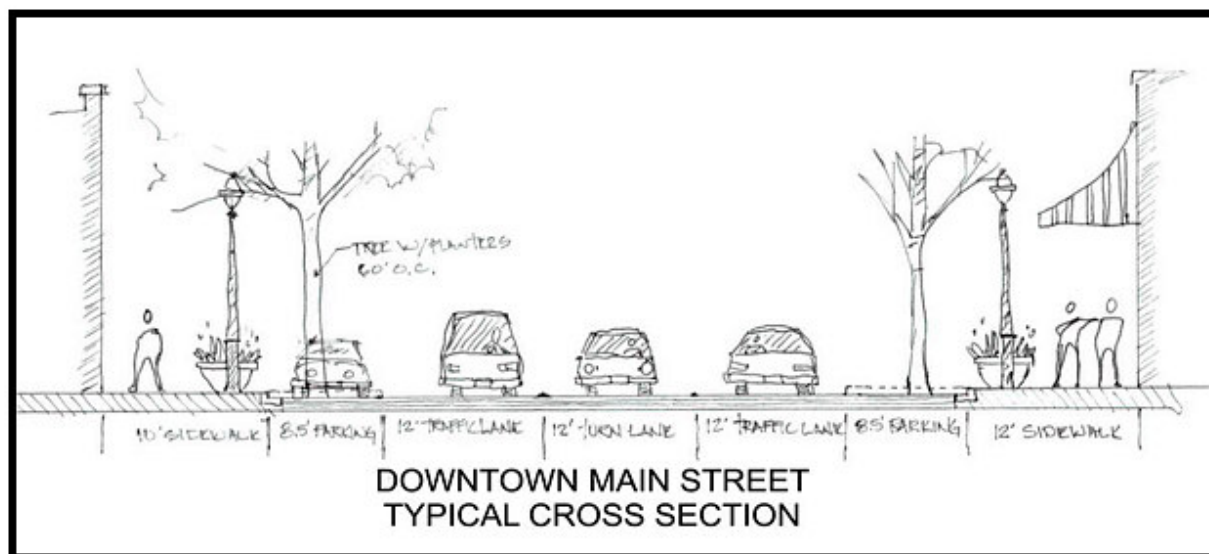
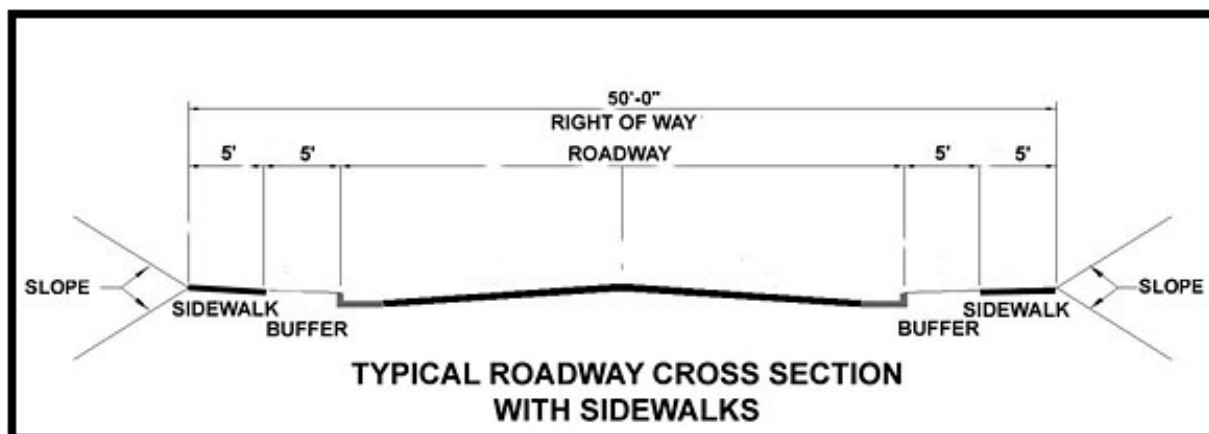


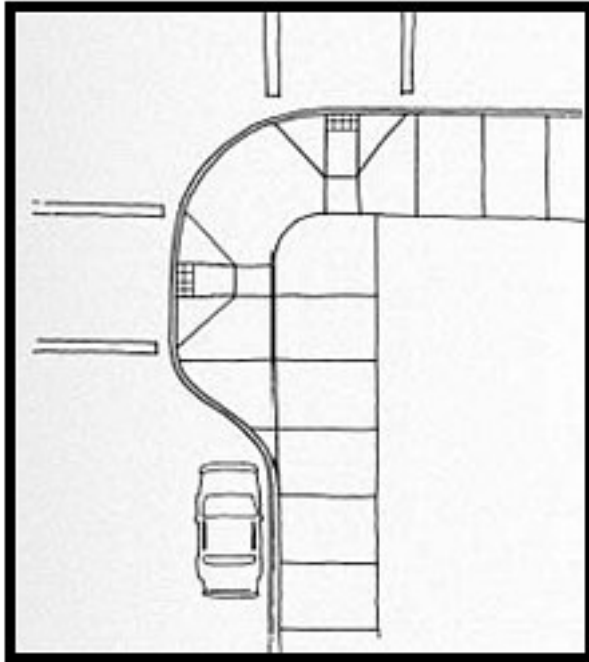


Sidewalk areas along Main Street and in the downtown district should be wider to allow for a denser population, street furniture, and other amenities.

Sidewalks shall be constructed within the street right-of-way in accordance with Town Standards. Any location in which a sidewalk is not within the dedicated street right-of-way must have a sidewalk easement dedicated to the Town of Jefferson. Sidewalks shall be installed at the time of roadway construction or widening unless otherwise approved by the Town. The Town may allow the developer to pay a fee (in lieu of) constructing the sidewalk in appropriate locations. In addition, sidewalks should be provided along streets within new developments as well as existing development expansion which are non-residential, multi-family or single family residents.

The following cross-sections exemplify the different standards that should be applied for the various applications.



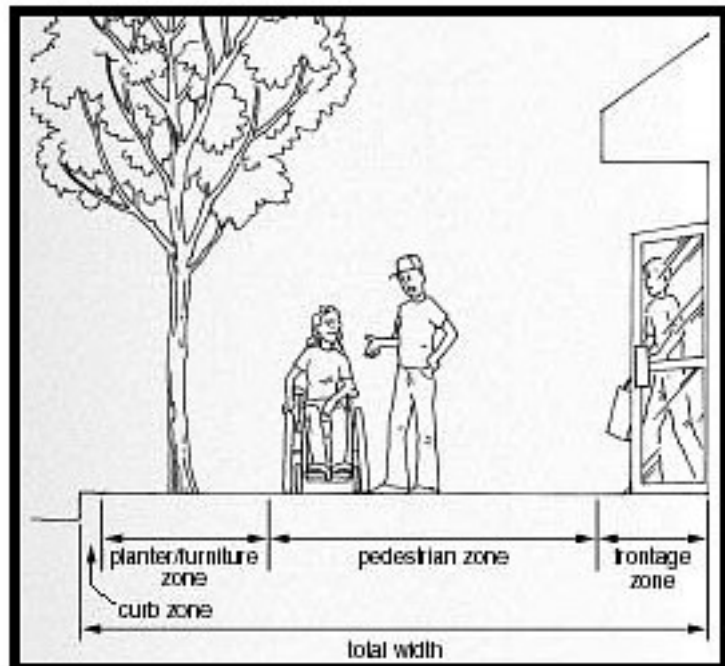


Crosswalks should consist of two white lines at least 12 inches wide and at least 6 feet apart.

Sidewalks should be at least 5 feet wide in order to accommodate 2 people walking side by side.

Pedestrian zones should be 5 to 8 feet wide.

Plant and furniture zones should be at least 5 feet wide.





All sidewalks shall be constructed in accordance with the standard detail found in the NCDOT Construction Manual. The following design guidelines for sidewalk construction are contained therein.

Guidelines for Sidewalk Design/Construction

- The minimum thickness of a sidewalk shall be four inches. At locations where a driveway crosses a sidewalk, a six inch depth is required.
- Sidewalks shall have a uniform slope toward the roadway of one quarter inch per foot.
- If a five foot wide buffer or planting strip is provided between the sidewalk and back or curb, the slope shall not be less than one quarter inch per foot nor greater than 18 inches toward the roadway unless approved by the Town. In some cases there may not be sufficient width to provide the planting strip.
- The design and construction shall conform to ADA standards.
- Where no curb and gutter exists on a road that requires sidewalks, the Town may require curb and gutter installation in addition to the installation of the sidewalk. The design of the sidewalk shall be such that pedestrian safety is provided and the usability of the sidewalk is not affected.
- All sidewalks shall be constructed of concrete unless otherwise approved by the Town. Sidewalks shall typically be a minimum distance of five feet off the back of curb with a minimum width of five feet. This requirement may vary upon the approval of the Town depending on site constraints.
- Where sidewalks and/or greenways intersect any section of curb and gutter or street section, a wheelchair ramp shall be installed per Town standards.
- Pipes, drains, or other concentrated stormwater devices shall not discharge across a sidewalk, but be piped or flumed under the sidewalk.
- All marked pedestrian traffic crossings must be approved by the Town or NCDOT Traffic Engineer prior to installation.
- All mid-block pedestrian traffic crossings shall be designated as a crosswalk with pavement markings and signage in accordance with MUTCD and must be approved by the Town or NCDOT Traffic Engineer prior to installation.



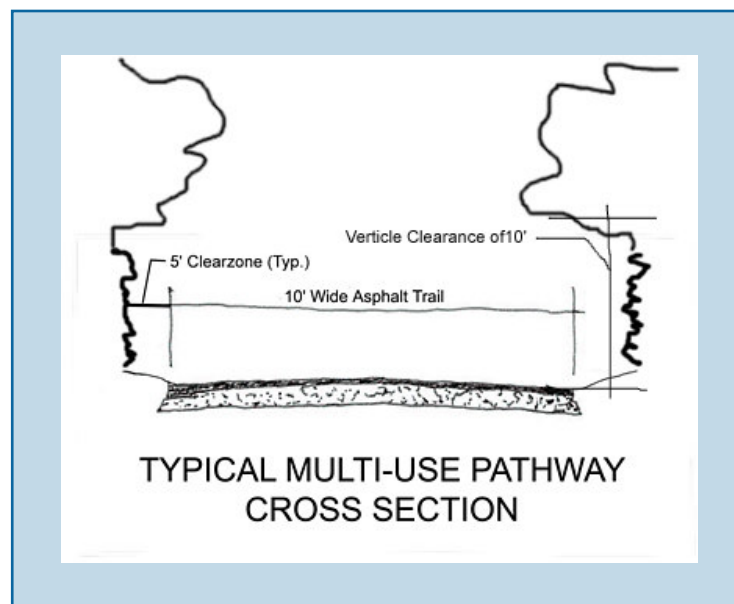
Sidewalks/Walkways Costs

The cost of a five foot wide concrete sidewalk is approximately \$33/square yard (including demolition and removal of existing paving). The cost of curb and gutter is approximately \$30/linear foot (including demolition and removal of existing curbing). Asphalt walkways are much less expensive in terms of construction cost but more difficult to traverse and more expensive to maintain.

Greenway Trail

As sidewalks have different standards for various applications, greenways vary due to such factors as space, existing conditions and usage. The pedestrian network which has been proposed differs in variety and purpose. The Lenoir Greenway is a great example of a pedestrian facility, which offers much versatility. The Lenoir Greenway is a multi-use facility, which is located off-street, and offers multiple opportunities for different users, such as walking, in-line skating and biking. Special considerations of safety should be made when these facilities are located near a roadway. Adequate separation or barriers should be implemented between the roadway and the multi-use path. The following cross-sections identify standards that should be implemented for each application.

A greenway is defined simply as a trail corridor on primarily undeveloped land, as along a river or between urban centers, that is reserved for recreational use or environmental preservation. As the greenway movement has experienced tremendous popularity, these facilities have been developed on abandoned railroad beds, utility corridors and through





residential communities. Most multi-use trails are wider than sidewalks for a variety of reasons. The minimum width for two-directional trails is 10 feet, however 12-14 foot widths are preferred where heavy traffic is anticipated. Due to many of the facilities being off-road, the larger width provides access for maintenance and emergency vehicles. A majority of greenways are constructed using asphalt as the surface. This application is used primarily due to the lower cost compared to concrete.

To create an aesthetically pleasing greenway, design techniques should be considered. Clearing of vegetation should be limited to clearing for construction and underbrush to increase sight lines and safety for the trail user. Meandering the greenway helps create opportunities for landscaping and varied sightlines, particularly along extended, straight corridors.

Greenway/Multi-Use Trails Costs

The cost of a 10 foot wide asphalt trail is approximately \$400,000/mile. This consists of a six inch stone base and two inches of asphalt.

Typical pavement design for a paved, off-road, multi-use trail should be based upon the specific loading and soil conditions for each project. These asphalt or concrete trails should be designed to meet loading requirements including maintenance and emergency vehicles.

Concrete: In flood prone areas, concrete should be used due to its durability. Asphalt can wash away or heave. In addition, concrete trails will withstand sub-grade failure and root intrusion better than asphalt surfacing.

Asphalt: Asphalt is predominately used on greenways primarily due to cost. It requires more maintenance than concrete due to its flexibility which can cause movement of the trail. It is also important to construct a two foot stone shoulder on both sides of the asphalt edge to help prevent the edges from failure and erosion.

Marked Crosswalks

Pedestrians need to be able to traverse the local transportation system as easily and safely as those in vehicles. Providing marked crosswalks is one of many ways to facilitate the safe crossing of streets and parking lots. A marked crosswalk is any crosswalk, which is delineated by white painted markings placed on the pavement. Crosswalks consisting of textured, colored or otherwise contrasting materials are 'unmarked' crosswalks unless



white paint is also present. A crosswalk may be marked with special paint, thermoplastic materials, plastic tape or other approved materials.

NCDOT follows the national guidelines outlined in the federal Manual of Uniform Traffic Control Devices (MUTCD), the Traffic Control Devices Handbook and other references. These references cover all aspects of the placement, construction and maintenance of all approved traffic control devices.

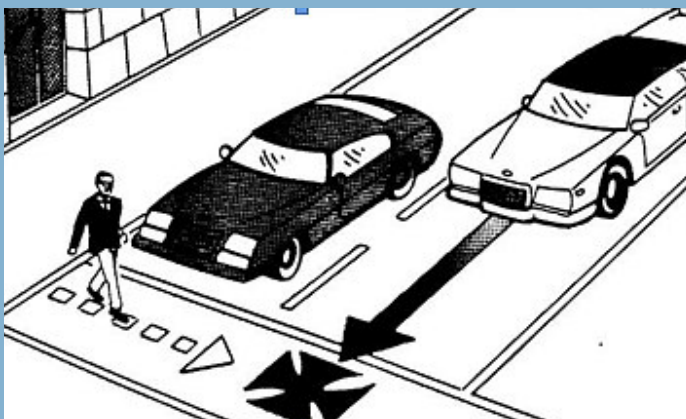
In order to ensure the public understanding of the meaning of all traffic control devices, they need to be consistent. All traffic devices, including crosswalk markings and signs must conform to all state and federal standards and regulations for dimensions, color, working and graphics. Legal crosswalks usually exist at all public street intersections whether marked or unmarked. However, the only way a crosswalk can exist at a mid-block location is if it is marked.



This intersection needs a marked crosswalk.

Crosswalks are not a guarantee of pedestrian safety. While state laws require a motorist to yield to pedestrians in a marked crosswalk, on roads with moderate to higher speeds

and traffic volumes, drivers seldom comply. More vehicle/pedestrian collisions occur at marked crosswalks on multi-lane streets with a high volume of vehicular traffic volume than at unmarked crosswalks. This appears to occur because pedestrians expect vehicles to stop for them when there is a marked crosswalk and drivers often fail to stop. Another safety concern on multi-lane roads is when the driver nearest the curb stops for a pedestrian, but



Multi-lane roads cause additional difficulties for pedestrians in crosswalks.



the driver in the next lane cannot see them and continues through the crosswalk, striking the pedestrian. Crosswalks should be considered primarily as a means to assist and direct pedestrians along the safest route, rather than as a way to stop traffic.

Crosswalks should be marked at intersections where there is substantial conflict between vehicle and pedestrian movements, where significant pedestrian concentrations occur, where pedestrians could not otherwise recognize the proper place to cross and where traffic movements are controlled. Examples of such locations are:

- Approved school crossings
- Signalized intersections
- Four-way stop intersections

Guidelines for Crosswalks

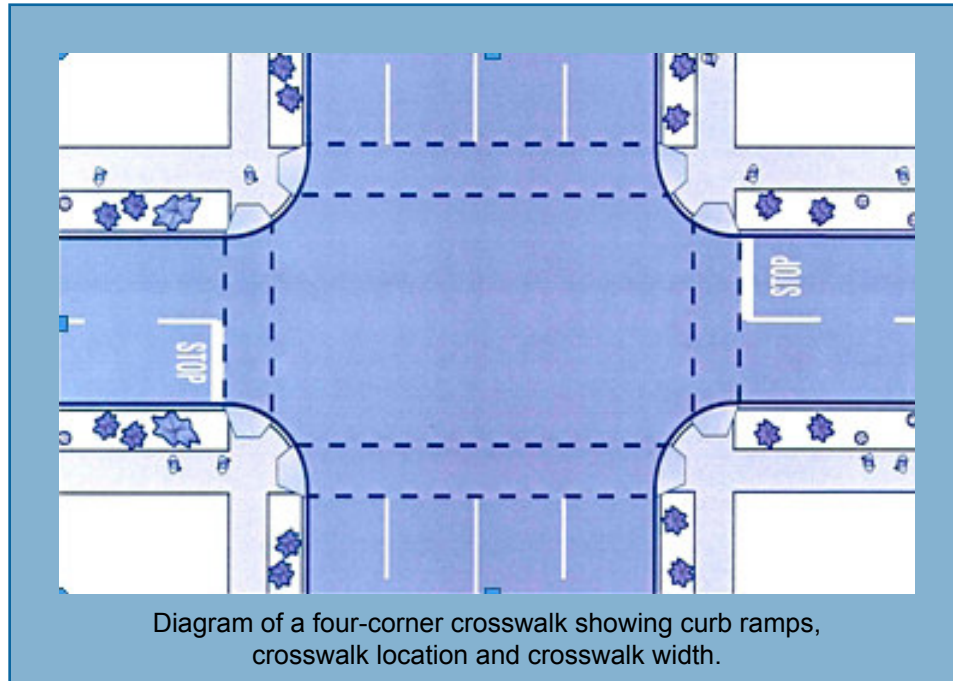
The following guidelines are taken from the USDOT Federal Highway Administration's *Pedestrian Facilities Users Guide – Providing Safety and Mobility* (2002), and the Association of State Highway and Transportation Officials' *Guide for the Planning, Design and Operation of Pedestrian Facilities* (2004).

- Crosswalks should not be installed at uncontrolled intersections where speeds exceed 40 miles per hour.
- As noted above, in some areas, crosswalks should be used together with other traffic control devices to increase pedestrian safety. This is especially important on roads where the average daily traffic exceeds 10,000 vehicles.
- The MUTCD requires that the width of crosswalks be at least six feet wide. In areas of high vehicle and pedestrian traffic, the crosswalks should be at least ten feet wide. The NCDOT recommends widths of 10 feet or greater.
- Pedestrian access to the crosswalks via curb ramps and other sloped areas should be fully contained within the crosswalk markings.
- Markings for the crosswalk should extend across the entire width of the roadway.
- The MUTCD recommends all crosswalk markings be white.
- The continental and ladder patterns for crosswalk markings are more easily seen and comprehended by motorists. Therefore it is recommended that one of these patterns be chosen for crosswalks in the Town of Jefferson. Lines should be 12 inches to 24



inches wide and spaced one foot to five feet apart, depending upon the location and width of the roadway.

- Additional devices such as traffic signals and beacons should be added where vehicle speeds and traffic are higher.



Many factors must be analyzed before deciding on the location and type of crosswalk to be installed. Some of the issues to be examined are:

- The number of pedestrians that will be served
- The function of the highway
- The volume and speed of vehicles
- The width of the road
- Both current and predicted future conditions
- The typical abilities of the pedestrians that would use the crosswalk
- Who will pay for and then maintain the crosswalk

Typical Crosswalks Costs

Regular striped:	\$100
Ladder or continental crosswalks:	\$300
Pattern Concrete:	\$20,000

Maintenance costs vary according to the region and the pattern of striping used.



Advance Stop Bars

In order to increase vehicle and pedestrian visibility, the vehicle stop bar should be applied to the street 15 to 30 feet back from the pedestrian crosswalk at signalized crossings and mid-block crossings. Stop bars are one to two feet wide and extend across all approach lanes at intersections. By moving the bar further away from the crossing, motorists are influenced to stop further back from the crosswalk when yielding the right of way to pedestrians. This helps to reduce conflicts (near collisions) between motor vehicles and pedestrians.

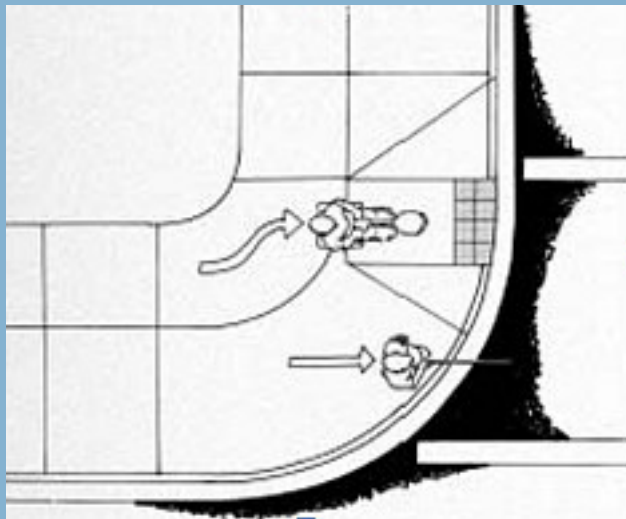
Advance Stop Bar Cost

Signage: \$50-\$150 plus installation

There is no additional cost if a new line is installed in new paving.

Curb Ramps

Curb ramps are vital in providing access between the sidewalk and the street for people who use wheelchairs and other mobility devices. Curb ramps are most commonly found at intersections, but they may also be used at other locations such as on-street parking, loading zones, bus stops and midblock crossings. The implementation regulations under Title II of the ADA, specifically identify curb ramps as requirements for existing facilities, as well as all new construction. Curb ramps for existing facilities must be included in Transition Plans. According to the Title II implementation regulations, priorities for the installation of curb ramps in existing facilities should include access to government facilities, transportation, public accommodations and for employees to their place of employment (U.S. Department of Justice, 1991a).



Crosswalks should be wide enough to allow people to use either the curb or the curb ramp.



For many people with mobility impairments, curb ramps actually make it more difficult to navigate the pedestrian corridor. Crutches and canes are sized to fit the individual user so that the energy required for walking is minimized on a hard, level surface. Use of these types of walking aids is more difficult on sloped surfaces such as curb ramps. Widening the crosswalk to allow people to use either the curb or the curb ramp will ease access for cane and crutch users who are not comfortable traveling on a sloped surface.

The curb is the most reliable cue that people with vision impairments use to identify the transition between the sidewalk and the street. The installation of curb ramps removes this cue and replaces it with a ramp which is much more difficult to detect. Therefore, it is important that when curb ramps are installed to create access for people who use wheelchairs, they are installed in such a way as to maximize detectability for people with vision impairments. The ADA requires the addition of a detectable warning on all curb ramps. This consists of truncated domes extending across the entire width of the ramp and must be in a contrasting color to the surrounding paving, either dark to light or light to dark.

Guidelines for Curb Ramps

- Provide a level maneuvering area or landing at the top of the curb ramp.
- Clearly identify the boundary between the bottom of the curb ramp and the street with a detectable warning.
- Design ramp grades that are perpendicular to the curb.
- Place the curb ramp completely within the marked crosswalk area.
- Avoid changes of grade that exceed 11 percent over a 610 mm (24 in) interval.
- Design the ramp that doesn't require maneuvering on the ramp surface.
- Provide a curb ramp grade that can be easily distinguished from surrounding terrain; otherwise, use detectable warnings.
- Design the ramp with grades of $7.1 \pm 1.2\%$. [Do not exceed 8.33 percent (1:12).
- Design the ramp and gutter with a cross slope of 2.0 percent.
- Provide adequate drainage to prevent the accumulation of water or debris on or at the bottom of the ramp.





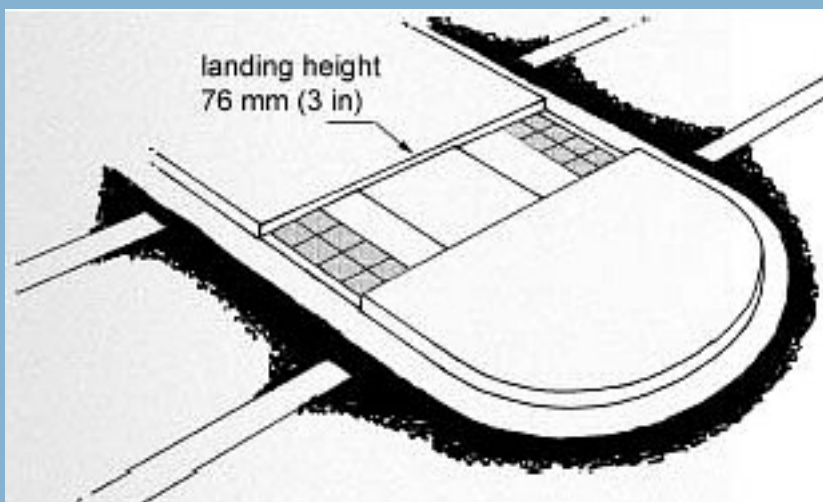
- Transitions from ramps to gutter and streets should be flush and free of level changes.
- Align the curb ramp with the crosswalk, so there is a straight path of travel from the top of the ramp to the center of the road to the curb ramp on the other side.
- Provide clearly defined and easily identified edges or transitions on both sides of the ramp to contrast with sidewalk.

Curb Ramps Costs

The cost is approximately \$1,000 to \$1,500 per curb ramp (new or retrofitted).

Raised Medians

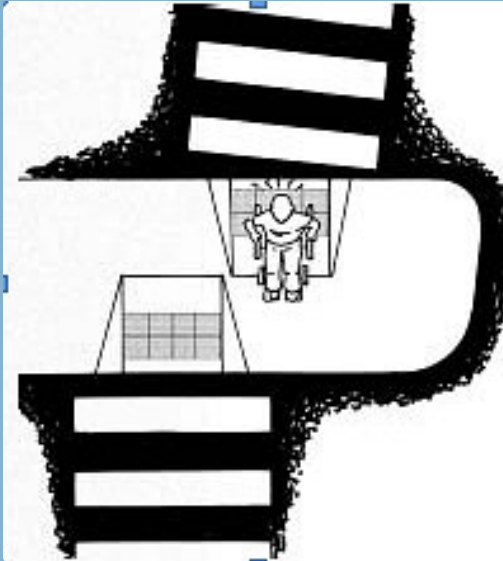
Medians (also known as refuge islands) are the portion of a divided roadway that separates traffic flows heading in opposite directions. At roundabouts, these are called splitter islands. Medians help pedestrians cross intersections by reducing the crossing distance from the curb to a protected area. This allows pedestrians to cross during smaller gaps in traffic. For this reason, medians are especially helpful for pedestrians who are unable to judge distances accurately. In addition, medians also help people with slow walking speeds to cross wide intersections during a short signal cycle. Medians are also useful at irregularly-shaped intersections, such as sites where two roads converge into one.



Cut-through at street level on a raised median.



In commercial districts, medians provide pedestrians with valuable protection from oncoming traffic. In residential areas, they serve as traffic calming devices and green space.



Curb ramps in medians must align for easy maneuvering by pedestrians.

Whenever possible, medians should be raised to separate pedestrians and motorists. Raised medians make the pedestrian more visible to motorists and they are easier for people with vision impairments to detect. Raised medians should be designed with a cut-through at street level or a ramp. This provides pedestrian access to individuals who cannot travel over a curb. Detectable warning surfaces should be placed at the edge of both ends of the median in order for the streets to be recognized by pedestrians who are visually impaired. If the corner includes a pedestrian actuated control device, one should also be located at the median.

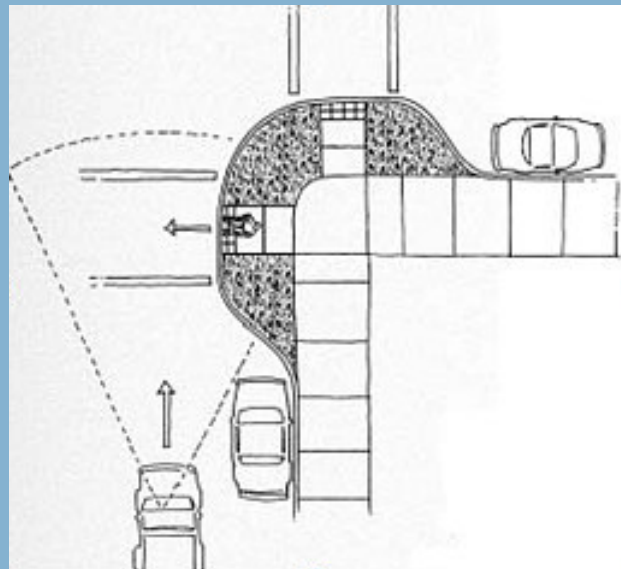
Raised Median Costs

The cost is approximately \$4,000 to \$30,000.

Curb Extensions

Curb extensions improve visibility between pedestrians and motorists and make it easier to install perpendicular curb ramps with level landings. They also reduce the crossing distance for pedestrians.

Low landscaping or grass can be added to the curb extension to clarify the appropriate path of travel for individuals with vision impairments.



Planted curb extension with sidewalk and curb ramp.



In addition, the following steps should be considered:

- Trim vegetation, relocate signs and utilities, and eliminate visual clutter
- Prohibit parking near the intersection corner
- Provide raised medians and crosswalks
- Provide an advance stop line before a marked crosswalk on a multi-lane road.



Intersection with curb extensions and clearly marked crosswalks.

Curb Extensions/Bulb-outs Costs

The cost of a curb extension can run from \$5,000 to \$25,000 per extension. The cost can increase depending on the amount of infrastructure that needs to be relocated.

Roundabouts

Roundabouts require vehicles to circulate counterclockwise around a center island. Roundabouts may eliminate the need for traffic signals for motorists. Unlike many other forms of traffic calming, roundabout benefits are aimed primarily at motorists. The installation of roundabouts prioritizes improving traffic flow, maximizing vehicular capacity and eliminating the need for stop signs and traffic signals. When designed correctly, roundabouts include raised splitter islands to channel incoming traffic approaching from the right. Although roundabouts are gaining popularity in the United States, they can be problematic in pedestrian areas until designs can include cues needed by pedestrians with vision impairments and cognitive disabilities.

Impact on Pedestrian Access

Roundabouts significantly complicate travel for people with vision and cognitive impairments. For example:



Negative Impacts

- Motorists exiting the roundabout are often not required to yield to pedestrians. This is a particular problem at designs where exiting design speed is increased.
- If properly designed, the crosswalk locations are set back from the intersection, to enhance pedestrian visibility and to prevent drivers from stopping at the entrance of the roundabout. This design has safety benefits for most pedestrians at the entering leg because vehicles are required to yield to vehicles in the roundabout. Pedestrians crossing the existing leg may be at a greater disadvantage because exiting speeds are usually increased. Setback crosswalks are difficult for people with vision impairments to identify because they are not at the roundabout itself.
- Busy roundabouts provide very few gaps long enough to cross. This can be especially problematic and unsafe for pedestrians such as children, elderly with mobility and cognitive impairments and people with vision impairments.
- Pedestrians with vision impairments experience difficulty seizing the right-of-way from exiting drivers due to the lack of pedestrian to driver eye contact.
- For persons with vision impairments, vehicles exiting the circle sound the same as motorists continuing around the circle.
- Due to the wide turning radii at the corner, pedestrians with vision impairments may fail to identify the intersection.
- Roundabouts are confusing for people with cognitive impairments due to the irregular design of the intersection. People with cognitive impairments may not be able to travel independently if these intersections exist in routes that are traveled in order to conduct daily functions and activities.

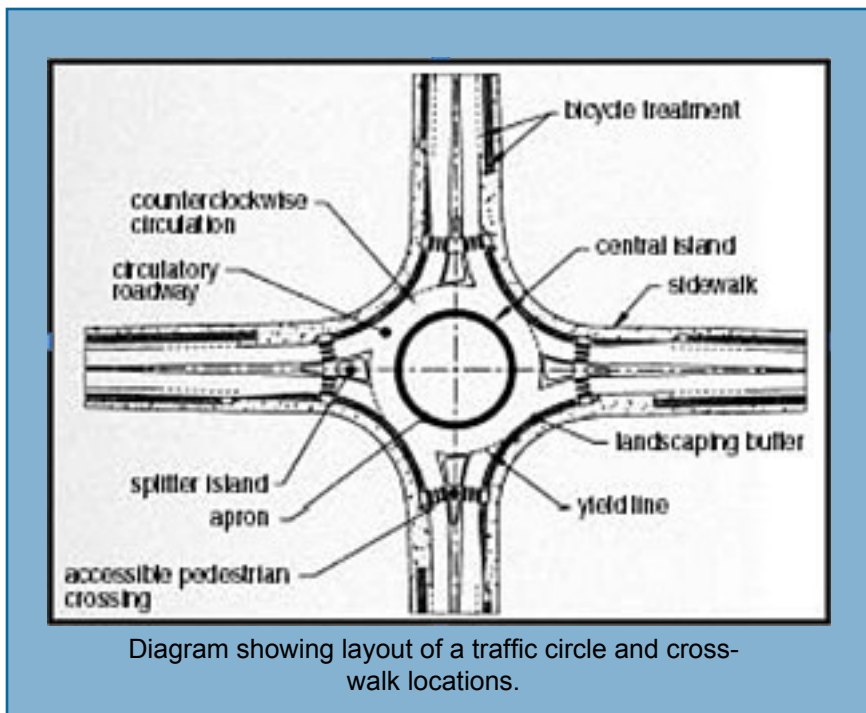




- When a crosswalk is setback from the intersection, pedestrians have to walk longer distances out of their way to cross the street.

Design Recommendations for Roundabouts

Designing roundabouts for people with vision impairments is a topic that warrants significant future research. Some smaller roundabouts may prove to pose few problems for people with vision impairments, but that depends on how busy or quiet it is. Smaller roundabouts in quiet or isolated environments may prove to pose fewer problems for people with vision impairments. Other roundabouts, in busy and noisy environments, may be identified as unusable by people with vision impairments regardless of the additional treatments used. The following recommendations could potentially improve conditions for pedestrians at roundabouts:



- Install setback, highly-visible crosswalks with detectable warnings and tactile indicators to identify the crossing for pedestrians with vision impairments and accessible pedestrian signals (including locator tones) to enable pedestrians to have sufficient crossing time. An accessible pedestrian signal can be provided to initiate the crossing phase.
- Install single lane roundabouts with single entry lanes, rather than multi-lane roundabouts, to shorten the crossing distance and enhance pedestrian visibility at the entry and exiting lanes.
- Add accessible medians and splitter islands to reduce crossing distances and allow pedestrians to negotiate one direction of traffic at a time.



- Add rumble strips or some other noise-generating device to increase the sound of cars making them more detectable and reduce the speed of cars as they exit the roundabout. Use slip resistant material for bicyclists.

Roundabout Costs

The cost for a landscaped roundabout varies widely and can range from \$45,000 to \$150,000 for neighborhood intersections and up to \$250,000 for arterial street intersections (not including additional right-of-way acquisition). However, once constructed, roundabouts have *lower* ongoing maintenance costs than traffic signals.

Pedestrian/Countdown Signals

Pedestrian signal heads should be used at all traffic signals where pedestrians are permitted to cross, unless pedestrian volumes are extremely low. The use of WALK/DON'T WALK pedestrian signal indicators at signal locations are important in many cases including: when vehicle signals are not visible to pedestrians; when signal timing is complex, e.g., there is a dedicated left turn signal for motorists; at established school zone crossings; when

an exclusive pedestrian interval is provided; and for wide streets where pedestrian clearance information is considered helpful. In addition, countdown signals offer an additional safety measure by informing the pedestrian the amount of time remaining to safely cross at a pedestrian crossing.



Pedestrian countdown signals attached to street lamps.

The international symbol, pedestrian signal head is preferable and is recommended in the MUTCD; the "WALK" and "DON'T WALK" word message is an allowable alternate. Pedestrian signal heads should

be clearly visible to the pedestrian at all times when in the crosswalk or waiting on the far side of the street. Larger pedestrian signal heads can be beneficial in some circumstances.



Signals may be supplemented with audible messages to assist trained visually impaired pedestrians. These should be used judiciously, because they can become a noise problem.

Guidelines for Pedestrian and Countdown Signals

- Pedestrian signals should be placed in locations that are clearly visible to all pedestrians.
- Larger pedestrian signals should be utilized on wider roadways, to ensure readability.
- Pedestrian signal pushbuttons should be well-signed and visible.
- Pedestrian signal pushbuttons should clearly indicate which crossing direction they control.
- Pedestrian signal pushbuttons should be reached from a flat surface, at a maximum height of three and one-half feet and be located on a level landing to ensure ease of operation by pedestrians in wheelchairs.
- Walk intervals should be provided during every cycle, especially in high pedestrian traffic areas.

Pedestrian Signal Costs

The cost ranges from \$20,000 to \$40,000.

Pedestrian Signal Timing Costs

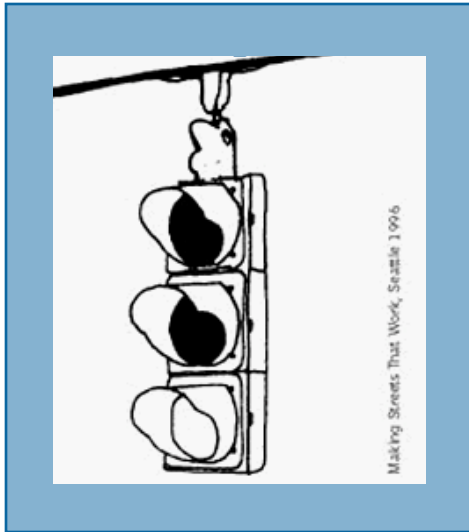
The cost ranges from \$20,000 to \$400,000.

Traffic Signals

Traffic signals create gaps in traffic flow allowing pedestrians to cross the street. They should allow adequate crossing time for pedestrians and an adequate clearance interval based upon a maximum walking speed of four feet per second. A lower speed of less than four ft/sec should be used in determining pedestrian clearance time for areas where there is a heavy concentration of elderly or children. Signals are particularly important at high use, mid-block crossings on higher-speed roads, multi-lane roads or at highly



congested intersections. National warrants from the “Manual on Uniform Traffic Control Devices” based on the numbers of pedestrians and vehicles crossing an intersection are usually used in the selection of traffic signal sites. However, judgment must also be used



on a case-by-case basis. For example: a requirement for installing a traffic signal is that there are a certain number of pedestrians present. If a new facility is being built, a park or recreational path for example, there will be a new demand and the signal should be installed in conjunction with the new facility, based on projected crossing demand. There may also be latent demand if a destination is not currently accessible but could become so with new facilities or redesign.

In downtown areas signals are often closely spaced, sometimes every block. They are usually spaced further apart in suburban or outlying areas. When high pedestrian traffic exists during a majority of the day, fixed-time signals should be used to consistently

allow crossing opportunities. Pedestrian actuation should only be used when pedestrian crossings are intermittent.

Traffic Signal Guidelines

- Traffic signals should be used where pedestrian traffic is regular and frequent. The signal should be timed to a consistent interval. Pedestrian actuation should only be used when pedestrian crossings are intermittent.
- Signal cycles should be kept short (ideally 90 seconds maximum) to reduce pedestrian delay. Pedestrians are very sensitive to delays and a 30 second maximum wait time is ideal.
- Marked crosswalks at signals can encourage pedestrians to cross at the signal and help dissuade motorists from encroaching into the crossing area.

Traffic Signal Cost

The cost ranges from \$20,000 to \$140,000.

Pedestrian Signal Costs

The cost ranges from \$5,000





Landscaping/Enhancement

A network of safe, comfortable, esthetically pleasing pedestrian corridors with connectivity to desirable destinations creates and promotes a livable community. Without each of these elements present, the walking community is incomplete. Safety, beauty and connectivity all play important roles in a comprehensive pedestrian plan and each basic fundamental should be considered throughout the entire planning process.

East Main Street in the downtown area is a roadway corridor where landscape improvements should be implemented. This enhancement should include elements such as decorative paving, street trees, pedestrian signals and bulb out intersections. Not only do these improvements produce an inviting street for pedestrians but it also creates traffic calming measures.



Landscaping and street furniture can enhance the pedestrian experience.

Landscaping can provide aesthetic improvement into a place that is otherwise hardened by buildings, concrete and streets. It can also be used to provide a buffer and separation from pedestrians and motorists, reduce the width of the roadway, calm traffic and help to develop a desired aesthetic appearance.

Street trees can make an immediate impact to a street by breaking up the visual hardscape often found in an urban downtown environment. In addition, trees and plantings can improve the environment by shading the street and providing cleaner air quality.



Tree islands, if designed correctly, can help collect and filter vegetative swales from nearby streets and buildings. These areas, called bioretention ponds, act as a sponge collecting oils, fertilizers and detergents and then releasing the stormwater. These practices are encouraged not only to improve water quality, but also to reduce storm flows during rain events.

The landscaping requirements typically fall on the local municipality, though there are some instances where community groups assist with installation and funding for landscaping and maintenance. Native plants are often preferable as they more easily adapt to the local environment. Growth characteristics of the plant material should be carefully considered when choosing plants for a particular location. For example, when choosing street trees, height, spread and root systems should all be considered to avoid overhead wires and the buckling of sidewalks and streets.

Guidelines for Landscaping

- Buffer zone plantings should be maintained at no higher than three feet to allow sight distance for motorists and pedestrians.
- Trees with large canopies planted between the sidewalk and street should generally be trimmed to keep branches at least seven feet above the sidewalk.
- Plants and trees should be chosen to match the character of the area.
- Landscape irrigation should be planned for and should be installed in the early phases of the construction process.

Landscaping Costs

Landscaping costs can vary greatly. They may be supplemented by funds from community organizations or homeowners associations.

Roadway Lighting Improvements

Proper lighting quality, placement and sufficiency can greatly enhance a nighttime urban experience as well as create a safe pedestrian facility. Two-thirds of all pedestrian fatalities occur during low-light conditions. Particular attention should be addressed at crosswalk locations so there is adequate lighting for motorists to see pedestrians.





In many cases, street lighting can be implemented along roadways to light the roadway and the sidewalk allowing for adequate lighting for the motorist and pedestrian. In urban areas such as downtown areas, low level lighting can be implemented through decorative streetlights which offer pedestrian-scale lighting. This type of lighting should be placed where there is high pedestrian volumes to offer improved aesthetics. A variety of streetlight choices include mercury vapor, incandescent or high pressure sodium. High pressure sodium is more cost effective but does not have the best light quality. Roadway streetlights can range from 20-40 feet in height while pedestrian-scale lighting is typically 10-15 feet.

When planning for lighting, it will be important to have sufficient lighting but also prevent light pollution and glare. A qualified lighting expert should be consulted in order to properly plan for the placement and wattage for area lighting.

Guidelines for Lighting Improvements

- Ensure pedestrian walkways and crosswalks are sufficiently lit.
- Consider adding pedestrian level lighting in areas of higher pedestrian volumes, downtown and at key intersections.
- Install lighting on both sides of the street in commercial areas.
- Use uniform lighting levels.

Roadway Lighting Improvements Costs

The cost varies depending upon the type of fixtures and the service agreement with the local utility company. The cost can range from \$10,000-\$20,000 per pole.

Street Furniture and the Walking Environment

Sidewalks should be continuous and be part of a system that provides access to goods, services, transit and homes. Well designed walking environments are enhanced by urban design elements and street furniture such as benches, bus shelters, trash receptacles and drinking fountains. Carefully designed streetscapes enliven commercial districts and foster community life.



Sidewalks and walkways should be kept clear of poles, sign posts, newspaper racks and other obstacles that could block the path of pedestrians or become tripping hazards. Benches, water fountains, bicycle parking racks and other street furniture should be carefully placed to create an unobstructed path for pedestrians. Such areas must also be properly maintained and kept clear of debris, overgrown landscaping, tripping hazards or areas in which water accumulates and causes problems for pedestrians.

Walking areas should also be interesting for pedestrians and provide a secure environment. Storefronts should exist at street levels and walking areas should be well lit and have good sight lines.

Street Furniture Guidelines

- Good quality street furniture will show that the community values its public spaces and is more cost effective in the long run.
- Ensure proper placement of furniture and fixtures. Do not block pedestrian walkways or curb ramps.

Street Furniture Costs

Benches \$600 - \$1200

Trash Receptacles \$500 - \$1000

Drinking Fountains \$1,000 – \$4,000

Bollards \$300 - \$1000

Transit Stop Treatments

Good public transportation is as important to the quality of a community as good roads. Well-designed transit routes and stops are essential to a usable system. Bus stops should be located at intervals that are convenient for passengers. The stops should be designed to provide safe and convenient access and should be comfortable places for people to wait. Adequate bus stop signing, lighting and a bus shelter with seating and trash receptacles are also desirable features. Bus stops should be placed in highly visible locations where people can reach them easily on foot. Convenient crossings are also important.

Proper placement of bus stops is a key to user safety. For example, placing the bus stops on the near side of intersections or crosswalks may block pedestrians' views of approaching





traffic and the approaching drivers' view of pedestrians. Approaching motorists may be unable to stop in time when a pedestrian steps out into traffic from behind the front of the bus.

Relocating the bus stop to the far side of the intersection can improve pedestrian safety since it eliminates the sight distance restriction caused by the bus. Placing bus stops at the far side of intersections can improve motor vehicle operation but should always be placed where pedestrians can cross the roadway safely.

The bus stop location should be fully accessible to pedestrians in wheel-chairs and should have paved connections to sidewalks where landscape buffers exist. Adequate room should exist to operate wheelchair lifts.

Guidelines for Transit Stop Facilities

- Ensure access to and from stops is provided for when transit stops are created.
- Ensure adequate room to load wheelchairs.
- Ensure a clear and comfortable walking path for passing pedestrians when placing transit shelters.
- Locate transit stops on the far side of marked crosswalks

Transit Stop Facilities Costs

The cost ranges from \$1,000 to \$10,000, depending on the type of facility or facility improvement.

Signs and Wayfinding

Signage is governed by the *Manual on Uniform Traffic Control Devices (MUTCD)*, which provides specifications on the design and placement of traffic and pedestrian signs installed within public right-of-ways. Signs are designed to provide important information that improves pedestrian and vehicular safety. By letting people know what to expect, there is a greater chance that they will react and behave appropriately. For example, giving motorists advanced warnings of upcoming pedestrian crossings or that they are entering a traffic calming area will enable them to modify their speeds. The amount and



types of signage should be carefully considered as the overuse of signs can result in noncompliance, confusion and disrespect.

Municipalities should develop clear guidelines for the use of vehicle and pedestrian signs. Care should be taken to avoid an overreliance on signs and paint to control motorist behavior. This may mean altering and/or relocating existing signs and markings that have proven to be ineffective for pedestrian safety.

The MUTCD has developed guidelines for signs and pavement markings that leave sufficient room for creative regulatory design. As a result there is leeway in adapting guidelines to specific signing and marking policy needs. Colors for signs and markings should conform to the color schedule recommended by the MUTCD. This uniformity allows for recognition and understanding across jurisdictions. The recommended background colors for signs are as follows:



- YELLOW - General warning and school signs
- RED - Stop or prohibition
- BLUE - Service guidance, route markings
- GREEN – Destination guidance, directional guidance, recreation, information
- BROWN - Public recreation and scenic guidance
- ORANGE - Construction and maintenance warning
- BLACK - Regulation
- WHITE – Regulation and route markings

A new fluorescent yellow-green color is now approved for use on school signs and warning signs. This bright color attracts the attention of drivers because it is unique.

For pavement markings, use:

- YELLOW - Centerline stripes
- WHITE - All other pavement stripes and markings, including edge stripes, lane markings and crosswalks





Pedestrian Signs

Pedestrian signs are designed to give information and direction in order to improve safety and relieve conflict between motorists and pedestrians. Signs are used to direct pedestrians to crosswalks or to limit pedestrian crossings to specific locations. Signs can also warn pedestrians of unexpected driver maneuvers. All signs should be periodically checked to make sure they are in good condition, free from graffiti and continue to serve a purpose.

Other signs may be used for pedestrians at traffic signals to define the meaning of the WALK, DON'T WALK, and flashing DON'T WALK signal indications. The decision to use these signs (or alternatively, stickers mounted directly on the signal pole) is strictly a judgment call and is primarily for educational purposes. As such, their use may be more helpful near schools and areas with concentrations of elderly pedestrians, two high-risk areas. This information may also be effectively converted into brochures for distribution and ongoing educational purposes.



Guidelines for Pedestrian Signs:

- Pedestrian signs must be in compliance with the Manual on Uniform Traffic Control Devices (MUTCD).
- Signs can be used direct pedestrian traffic to desirable crossing locations and to prohibit pedestrian crossings at undesirable locations.
- Installing too many signs at a location should be avoided to prevent confusion and disregard.

Aside from signs designed to impart information or explanation to pedestrians, there are additional types of signs, directed at both pedestrians and motorists. These signs are intended to increase the safety of pedestrians and bicyclists.



Regulatory Signs

Regulatory signs are designed to warn motorists and pedestrians of a legal requirement such as STOP or YIELD. These signs require certain actions and are enforceable by law. Many motorist signs, including stop signs, yield signs, turn restrictions and speed limits, have a direct or indirect impact on pedestrians. Some examples of signs which affect pedestrians include pedestrian warning signs, motorists warning signs, NO TURN ON RED signs and guide signs.

The NO TURN ON RED sign may be used in some instances to facilitate pedestrian movements. *The Manual on Uniform Traffic Control Devices* lists six conditions when “no turn on red” may be considered, three of which are directly related to pedestrians or signal timing for pedestrians.



The use of NO TURN ON RED signs at an intersection should be evaluated on a case-by-case basis. Less restrictive alternatives should be considered in lieu of NO TURN ON RED. Also, supplementary signs, such as WHEN PEDESTRIANS ARE PRESENT or WHEN CHILDREN ARE PRESENT may be placed below the NO TURN ON RED sign.

There are occasions when no-turn-on-red restrictions are beneficial and specific recommendations relating to pedestrians include:

- Part-time restrictions should be discouraged; however, they are preferable to full time prohibitions when the need only occurs for a short period of time.
- Universal prohibitions at school crossings should not be made, but rather restrictions should be sensitive to special problems of pedestrian conflicts, such as the unpredictable behavior of children and problems of the elderly and persons with disabilities. Pedestrian volume should not be the only criterion for prohibiting right turns on red.

There are a number of regulatory signs aimed directly at pedestrians, which include:

- PEDESTRIANS PROHIBITED signs to prohibit pedestrian entry at freeway ramps.
- Pedestrian crossing signs are used to restrict crossings at less safe locations and to divert them to optimal crossing locations. Various alternatives include the USE CROSSWALK (with supplemental arrow) sign, which may be used at intersections





with traffic signals that have high conflicting turning movements or at mid-block locations directing pedestrians to use an adjacent signal or crosswalk. The signs have most applicability in front of schools or other buildings that generate significant pedestrian volumes.

- Traffic signal signs include the pedestrian push-button signs or other signs at signals directing pedestrians to cross only on the green light or WALK signal. Pedestrian push-button signs should be used at all pedestrian-actuated signals. It is helpful to provide guidance to indicate which street the button is for (either with arrows or street names). The signs should be located adjacent to the push button and the push buttons should be accessible to pedestrians with disabilities.

Warning Signs

Warning signs are used to inform unfamiliar motorists/ pedestrians of unusual or unexpected conditions. Warning signs predominantly fall under the permissive category (“may” condition) and when used, should be placed to provide adequate response times. Warning signs are generally diamond-shaped with black letters or drawings on a yellow background and should be of reflective material or illuminated. Overuse of warning signs breeds disrespect and should be avoided.

The warning sign predominantly used to warn motorists of possible pedestrian conflicts is the Advance Pedestrian Crossing sign. This sign should be installed in advance of mid-block crosswalks or other locations where pedestrians may not be expected to cross. This significantly minimizes their use at most urban intersections since pedestrian crossings are an expected occurrence. This sign may also be selectively used in advance of high-volume pedestrian crossing locations to add emphasis to the crosswalk.

Where there are multiple crossing locations, a supplemental distance plate may be used (NEXT XXX FEET). The advance pedestrian crossing signs should not be mounted with another warning sign (except for a supplemental distance sign or an advisory speed plate) or regulatory sign (except for NO PARKING signs) to avoid information overload and to allow for an improved driver response. Care should be taken



Advance Pedestrian Warning sign



in sign placement in relation to other signs to avoid sign clutter and to allow adequate motorist response.

The Pedestrian Crossing Sign is similar to the Advance Pedestrian Crossing sign, but has the crosswalk lines shown on it. This sign is intended to be used at the crosswalk. When used, it should be preceded by the advance warning sign and should be located immediately adjacent to the crossing point. To help alleviate motorist confusion, a black-and-yellow diagonally downward pointing arrow sign may be used to supplement the pedestrian crossing sign.



The Playground sign may be used in advance of a designated children's play area to warn motorists of a potentially high concentration of young children. This sign should generally not be needed on local or residential streets where children are expected. Furthermore, play areas should not be located adjacent to high-speed major or arterial streets, or if so, should be fenced off to prevent children from darting into the street.

According to the *Traffic Control Devices Handbook*, CAUTION-CHILDREN AT PLAY or SLOW CHILDREN signs should not be used since they may encourage children to play in the street and may encourage parents to be less vigilant. Such signs also provide no guidance to motorists in terms of a safe speed, and the sign has no legal basis for determining what a motorist should do. Furthermore, motorists should expect children to be "at play" in all residential areas, and the lack of signage on some streets may indicate otherwise. The signs are unenforceable and act as another roadside obstacle to pedestrians and errant motorists. Use of these non-standard signs may also imply that the involved jurisdiction approves of streets as playgrounds, which may result in the jurisdiction being vulnerable to tort liability.



School Warning signs include the advance school crossing signs, the school crossing sign, SCHOOL BUS STOP AHEAD sign, and others. School-related traffic control devices are discussed in detail in Part VII (Traffic Controls for School Areas) of the MUTCD. A



reduced speed limit sign with flashing lights can be installed ahead of the actual crossing. The lights are set to flash during school hours, alerting drivers that a lower speed limit is in effect when the flashers are operating. Another sign and light combination is SCHOOL SPEED LIMIT XX, where the speed limit is illuminated during school hours.

The MUTCD allows for the development of other specialty warning signs based on engineering judgment for unique conditions. These signs can be designed to alert unfamiliar motorists or pedestrians of unexpected conditions and should follow the general criteria for the design of warning signs. Their use should be minimized to retain effectiveness and should be based on informed judgment.

Directional Signs

Directional signs for pedestrians are intended to assist people who are new to the area or to assist residents who may not know the most direct route to a destination by foot. Use distances meaningful to pedestrians, such as the number of blocks or average walking time.

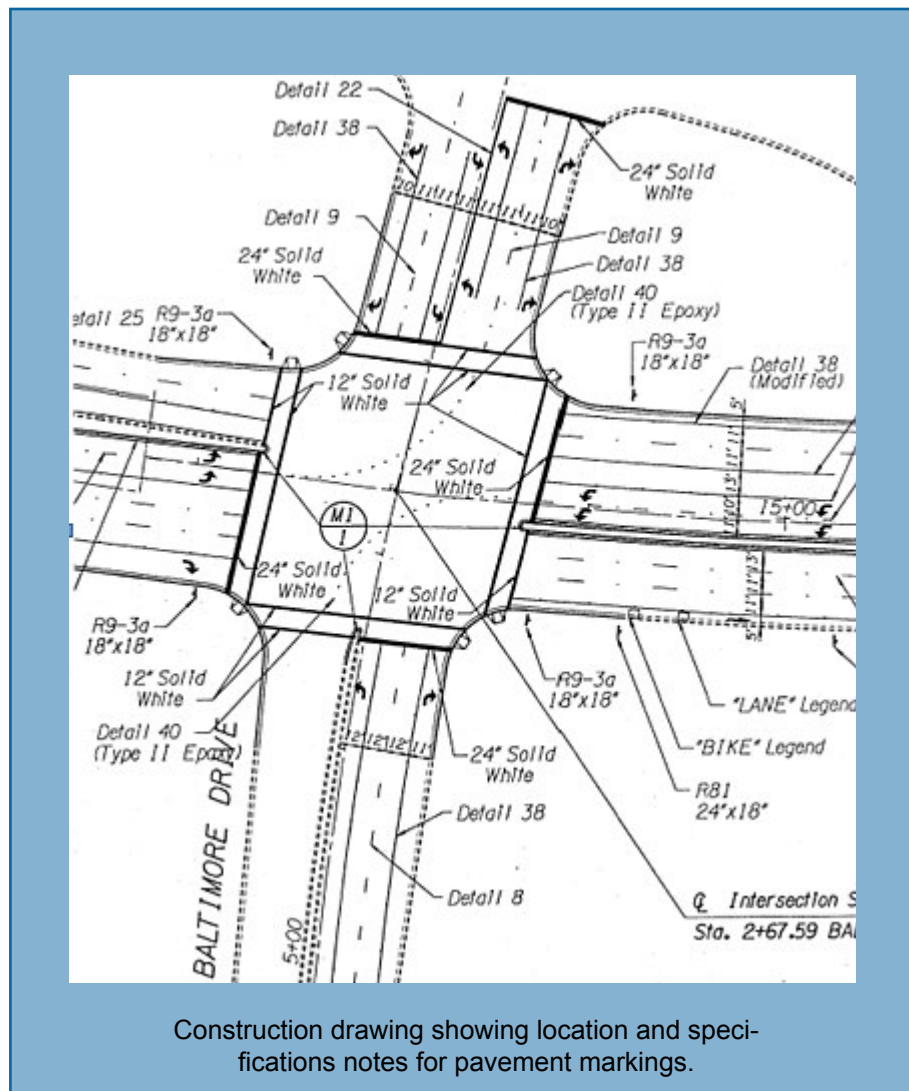


Pedestrian "way-finding" sign.



Pavement Word and Symbol Markings

The MUTCD allows for the use of pavement word and symbol markings such as SCHOOL XING or PED XING, as motorist warning devices. These may be helpful on high-volume or high speed streets with unusual geometrics (such as vertical or horizontal curves) in advance of a pedestrian crossing area. Markings should be white and placed to provide an adequate motorist response. Their use should be kept to a minimum to retain effectiveness.



- END OF SECTION -



Section 6 Policy and Program Recommendations

6.1 OVERVIEW

This Section outlines local measures to increase walking and to promote pedestrian safety. It provides the goals and objectives for a pedestrian network, noting Jefferson's role in addressing pedestrian issues and needs. In addition, actions and policies are listed to help integrate the pedestrian system into the transportation system.

In order for Jefferson to have a manageable pedestrian network that serves to promote pedestrian transportation, it is important for the necessary policies, ordinances, funding and staffing infrastructure to be in place.

Previous planning efforts have outlined pedestrian goals and needs for Jefferson. The emphasis on pedestrian considerations parallels new policies within the region and state as well. The North Carolina Department of Transportation's (NCDOT) Board of Transportation Resolution (2000) explains that "bicycling and walking accommodations shall be a routine part of the NCDOT's planning, design, construction and operations activities" and that "bicycling and walking are a critical part of the state's transportation activities."

The following three sections describe policies, programs and action items. These elements were developed using and evaluating existing planning documents mentioned in Section 3. The Steering Committee also assisted in developing the overall goals, which included the following:

- Enhance the pedestrian environment and increase opportunities to choose walking as a safe mode of transportation;
- Improve the health of citizens in the Town of Jefferson;
- Develop standards that enhance livability, economic opportunity, safety and quality of life; and
- Promote pedestrian activity as a viable alternative to automobile use.





6.2 POLICY RECOMMENDATIONS

The design and planning of pedestrian facilities are important components of roadway design. Fundamentally, both modes of transportation (pedestrian and vehicular) should acknowledge each other in matters of safety, accommodation and relationship. Pedestrian movement has become an important focus for the Town of Jefferson and the surrounding community. The public needs connectivity, safer routes and more walking opportunities. Although public meetings do not capture a complete synopsis of the Town's pedestrian needs, they do identify concerns and issues. Based on information from the general public, there is a perceived need for an expanded pedestrian network in the Town of Jefferson.

Town staff and the Steering Committee also recognize other important issues. Traffic and safety are of utmost importance to the Town of Jefferson. Many areas within the Town were acknowledged as safety concerns that need to be addressed with regard to reducing potential pedestrian accidents. Increasing public safety (with devices such as pedestrian signals, signage and the removal of existing barriers) will create a user-friendly pedestrian network and thereby, increase the number of pedestrians.

Land Use

As part of the Jefferson Pedestrian Plan, the Town should continue to promote pedestrian facilities, particularly with new construction. Sidewalks should always be required for new streets, improved streets or street extensions. Although developers may argue that this requirement increases development costs, this requirement would continually enhance and promote the pedestrian network established by the Town.

This pedestrian plan also recommends regulations that require sidewalk facilities for new construction, renovations and additions to existing structures. As urban infill properties re-develop, sidewalks should be constructed with these projects. In some instances, these sidewalks may still be disconnected, but over time, as these developmental projects continue, they will enhance pedestrian connectivity and reduce costs for the Town.

Alternatives may be offered to developers by the Town due to anticipated future thoroughfare improvements. The Town of Jefferson can offer the developer the opportunity of paying a fee in lieu of the actual construction of pedestrian facilities. This allows the Town to have control over current and future construction and maintenance of the pedestrian facilities. It also allows the Town to develop facilities in a continuous and efficient way, preventing the pedestrian facilities from being removed by the developer. The requirement of sidewalk construction "fee in lieu of construction" should be included in development regulations and the subdivision code.



Although the Town should be flexible with development opportunities, it must require the developer to provide right-of-ways or easements for pedestrian facilities. All development approved by the Town must include the accommodation of pedestrians by the developer(s).

Access, Connectivity and Barriers

Most of the pedestrian facilities are located along existing roads. These areas are typically more accessible than off-road, multi-purpose trails and are primarily used for transportation. Therefore, these types of facilities will require the most safety considerations due to the proximity of vehicular traffic. East Main Street is the primary pedestrian corridor in Jefferson. The sidewalks on East Main Street have some deficiencies such as damaged sidewalk sections, lack of ADA-compliant curb ramps and unmarked street crossings. As development and redevelopment occur in these areas, Town policies could require repair and reconstruction of these facilities.

The proposed Jefferson Greenway will be used for both recreation and an alternate transportation route through town. The Greenway will serve as a link from the western residential neighborhoods to Tyson Park, the downtown area and the Mountain Village Shopping Center. Future expansions of the Greenway could connect to West Jefferson and the Todd South Fork Greenway. The connectivity of this greenway with destination points will create an important linkage. It will allow the users to access destinations with the use of motorized vehicle.

The predominate barriers within the pedestrian system in the Town of Jefferson vary. Limited right-of way, steep topography and significant drainage features will limit the options for the system. The purchasing of property and/or easements can be expensive and there can be difficulty in establishing agreements with landowners. Therefore, the Town will need to prioritize these items and determine priorities in the connecting of facilities. The major manmade barrier to pedestrian facilities is US Hwy. 221 that currently blocks north/south pedestrian transportation. As development and construction occur, efforts should be made to improve pedestrian access.

The following have been identified as major safety hazards within the pedestrian network:

- Intersection of East/West Main with North/South Main Streets
- Intersection of Academy Street with US 221
- Intersection of Government Circle with US 221
- Intersection of Long Street with South Main Street
- Intersection of Hospital Drive with East Main Street and US 221





POLICY RECOMMENDATIONS AND ACTION ITEMS

Pedestrian Network

Create and maintain a pedestrian route network that strengthens the local communities of Jefferson by connecting to existing and future parks, shopping centers, government offices and businesses.

Recommendation #1 - The pedestrian transportation plan shall require sidewalks on one side of all residential streets and all thoroughfares and collector roads within walking distance of parks, shopping centers or similar facilities. Exceptions may be considered on a case by case basis due to such considerations as difficult terrain, inadequate width or exponential costs.

Recommendation #2 - Update Town ordinances and plans to reflect pedestrian plan recommendations and proposals.

Recommendation #3 - Provide connectivity along proposed thoroughfares such as US Route 221, NC 88 and Business US Route 221.

Recommendation #4 - Develop a system of way-finding signage for pedestrian facilities and greenways.

Recommendation #5 - Construct greenways as identified on the Proposed Pedestrian Facilities Map.

Recommendation #6 - Maintain and repair existing sidewalks ensuring that facilities are safe and free of obstacles and debris.

Recommendation #7 - Repair all noncompliant pedestrian facilities and ensure all new facilities should provide ADA accessibility to the maximum extent possible.

Recommendation #8 - Coordinate planning efforts with local and surrounding jurisdictions to provide regional pedestrian facility connectivity

Recommendation #9 - Require developers to provide pedestrian connectivity to adjacent developments and destination areas.



Safety

Create, implement and maintain safe pedestrian facilities which allow for a “walkable” community.

Recommendation #10 - Partnerships should be formed with the local school systems to initiate and implement school safety programs for school children.

Recommendation #11 - Install and/or replace all damaged and noncompliant pedestrian facilities as noted in the network recommendations, Items 6 and 7.

Recommendation #12 - Prioritize sidewalk implementation where gaps are located and where there is a high volume of pedestrian activity.

Recommendation #13 - Ensure that all sidewalks are extended across driveways at safe and usable cross slopes.

Recommendation #14 - Create a maintenance program which monitors existing sidewalks for damage and fills in gaps in the pedestrian system.

Recommendation #15 - Establish a budget for sidewalk repair and expansion to obtain connectivity.

Recommendation #16 - Provide pedestrian scale lighting at regular intervals where there is pedestrian activity at remote areas and traffic intersections.

Recommendation #17 - Connect local businesses to the public sidewalk system.

Recommendation #18 - Ensure that new construction projects are installed and meet all design requirements

Crossing Safety

Improve and construct all pedestrian crossings in areas where there is a high volume of pedestrian activity or where safety is an issue.

Recommendation #19 - Install marked crosswalks at all intersections.

Recommendation #20 - Evaluate traffic intersections for possible design elements such as extended curbs and refuge islands for pedestrian safety.





Recommendation #21 - Update local traffic intersection guidelines to meet current state and federal requirements.

Recommendation #22 - Implement lower speed limits where there is a high collision rate with and high volume of pedestrian activity.

Recommendation #23 - Ensure that traffic intersections are well lit.

Recommendation #24 - Evaluate pedestrian facilities for safety issues and implement solutions.

Traffic Signals

Implement traffic signals at unsafe and dangerous intersections which improve pedestrian conditions

Recommendation #25 - Install pedestrian signals at all major intersections.

Recommendation #26 - Seek funding opportunities which help with design assistance and implementation of traffic and pedestrian signals.

Recommendation #27 - Review the signal timing to ensure that pedestrians have adequate crossing times at intersections.

Recommendation #28 - Consider audible pedestrian signals near senior centers and other high volume pedestrian attractors.

Recommendation #29 - Consider using “countdown” pedestrian signals near high pedestrian volume locations such as downtown.

Community Strengthening

Provide amenities and elements that enhance the pedestrian environments and create a desirable place to live and work.

Recommendation #30 - Implement streetscape improvements in the downtown that include design elements such as decorative paving, street trees and furniture.





Recommendation #31 - Develop environmental education and interpretative facilities, particularly along greenway corridors.

Recommendation #32 - Provide a planting strip between sidewalks and roadway for street trees and low plantings.

Recommendation #33 – Amend the current zoning ordinance to create a Downtown Overlay District. This special District will allow the Town to promote pedestrian friendly facilities, encourage economic development, regulate the character and appearance of the Downtown and preserve and protect the adjoining neighborhoods.

6.3 OTHER POLICIES

Identify Countermeasures

National statistics indicate that nearly one-third of all pedestrian-related vehicular accidents occurred within 50 feet of a street intersection. Even though crosswalks at intersections may be properly marked with appropriate signage, accidents still occur. Many times the pedestrian does not take the proper precautions when crossing intersections. Sometimes the driver is at fault by failing to yield to pedestrians. Drivers and pedestrians should both take a defensive attitude toward pedestrian/vehicular safety when approaching intersections. NCDOT has published the handbook *A Guide to North Carolina Bicycle and Pedestrian Laws: Guidebook on General Statutes, Ordinances, and Resources*. This document serves as an educational tool for pedestrians, drivers and the general public.

Statistically, less than ten percent of fatalities in the nation involved a pedestrian walking along a road and not on a sidewalk. Most of these incidents involved the pedestrian walking “with” the traffic and being struck from behind. Safety guidelines suggest that pedestrians “face” the traffic when walking. Over one-fourth of pedestrian accidents occurred at mid-blocks. This type of accident is typically associated with a pedestrian *darting* across the road. Prior to establishing a marked mid-block crossing, proper evaluation should be done to ensure the safety of the public.

The two noted types of pedestrian accidents represent over 65% of pedestrian fatalities in the nation. Over the past several years, countermeasures have been developed to mitigate pedestrian accidents. Countermeasures are generally “site-specific” improvements, which hopefully provide immediate solutions. The most effective countermeasures include roadway design, intersection design, traffic calming, traffic management, signals and signage, and pedestrian facility design. These planning and engineering methods are instrumental in





reducing pedestrian accidents. Education and enforcement are also countermeasures that must be implemented in the prevention of pedestrian accidents. The following are examples of countermeasures that are related to pedestrian safety in Jefferson.

Traffic Management

- Diverter*
- Partial Street Closure*
- Pedestrian Street/Malls*

Roadway Design

- Roadway Narrowing*
- Lane Reduction*
- Driveway Improvements*
- Raised Medians*
- Curb Radius Reduction*
- Improved Right-Turn slip-Lane Design*

Signals and Signage

- Traffic Signals*
- Pedestrian Signals*
- Pedestrian Signal Timing*
- Traffic Signal Enhancements*
- Right-Turn-on-Red Restrictions*
- Advance Stop Lines*
- Signing*

Education and Enforcement

- Neighborhood Identity*
- Speed-Monitoring Trailer*
- On-Street Parking Enhancements*
- Pedestrian/Driver Education*
- Police Enforcement*

Intersection Design

- Roundabouts*
- Modified T-Intersections*
- Intersection Median Barriers*

Traffic Calming

- Curb Extensions*
- Chokers*
- Crossing Islands*
- Chicanes*
- Mini-Circles*
- Speed Tables*
- Raised Intersections*
- Raised Pedestrian Crossings*
- Gateways*
- Landscaping*
- Specific Paving Treatments*
- Serpentine Design*
- Woonerf*

Pedestrian Facility Design

- Sidewalks and Walkways*
- Curb Ramps*
- Marked Crosswalks and Enhancements*
- Transit Stop Treatments*
- Roadway Lighting Improvements*
- Street Furniture/Walking Environment*

Maintenance

Safety consideration should be a high priority with existing and new facilities. Continual maintenance will be required to have a functional pedestrian network. Pedestrians typically aspire to use a facility that is in a good and safe condition; otherwise it will not be used effectively. In addition to sidewalks, crosswalks at traffic intersections and mid-block crossings need to conform to the Manual of Uniform Traffic Control Devices



(MUTCD). Currently, there are numerous areas within the Town that have no handicap ramp or crosswalk signage; therefore, they are not ADA compliant. With an increase in the population of senior citizens, it is imperative that accessibility and user needs be addressed in these areas. In order to affectively address these issues, it is recommended that the Town Staff conduct an inspection of existing pedestrian facilities within the Town on a quarterly basis to not only address previously identified maintenance issues, but also to inventory any additional areas that have occurred recently.

Signage

Proper signage is an important part of any transportation system whether it is pedestrian or vehicular in nature. Signs in schools zones, parking areas, et cetera, alert drivers to the presence of pedestrians in the area. Signage for pedestrian facilities is equally as important as signage for roadways. Often, pedestrian facilities lack signs directing pedestrians along a designated route. It is hard to imagine having to walk to a specific destination without knowing the exact route to use; but this is often the case with pedestrians, especially visitors to the area. This plan encourages the Town of Jefferson to develop a system of well-placed signs to help visitors and residents to better use the Town's pedestrian system.

Spot Improvement Programs

The Town of Jefferson will be responsible for most of the spot improvements within the Town. *NCDOT's Spot Improvement Program* also has funds available for spot improvements that are less than \$250,000. *Spot improvements* are small projects such as the maintenance of accessible ramps, the repair of damaged sidewalks and the removal of debris. These improvements should be performed on a case by case basis with special consideration give to hazardous areas. The Town should inventory and inspect areas requiring spot improvements annually, prioritize these locations and proceed with the proper implementations.

Traffic Calming Initiatives

There are many areas within the Town where traffic speed is a problem. These areas may meet standard roadway criteria; however, they are dangerous locations from the perspective of the pedestrian, creating unsafe situations. East Main Street in downtown (and other high pedestrian traffic areas) need safe traffic speeds in order to reduce the possibility of vehicle/pedestrian accidents. Pedestrians want to be in *secure* areas where they feel comfortable and vehicular traffic is controlled.





There are many simple and effective methods used to achieve traffic calming. These techniques can be as simple as lane striping or on-street parking. Subconsciously, a driver feels the need to travel slower in areas where the traffic lane is *visually* narrower. Methods such as street trees, bulb-outs and crossing islands may not narrow the actual traffic lane but will create a constricted visual corridor of the roadway, causing most drivers to slow their speed. Other techniques such as speed tables, raised crosswalks and specialty pavement all attract the driver's attention, causing an immediate slow down. Although many speed tables and similar measures have been used successfully throughout the state, it is imperative that proper planning, evaluation and engineering occur before these devices are implemented. (Photographs and diagrams of traffic calming devices were illustrated in Section 5.)

Transit Interface

The Ashe County Transportation Authority (ACTA) operates a bus, which is extremely important for many residents in the Town. The bus currently has four stops within the Town of Jefferson, one at a senior housing complex, two at Mountain Valley Shopping Center and one at the Ashe Memorial Hospital. As the system continues to evolve, it will be necessary to provide a pedestrian network that integrates with the existing and proposed transit stops. The Town should continue to work with the ACTA to provide adequate facilities, add new bus stops along East Main Street and South Main Street, and promote mass transit transportation.

In addition, shelters and street furniture should also be implemented at bus stops. The Town will need to coordinate this effort with the Ashe County Transportation Authority. This Pedestrian Plan reflects proposed transit stops and connectivity of pedestrian facilities. Typically local pedestrians will only use transit stops that are safe, protected and user-friendly as they travel to their respective destinations.

6.4 PROGRAM RECOMMENDATIONS

Education, encouragement, and enforcement programs should be in place to teach and promote safety and ensure the success of Jefferson's pedestrian network for the future. The recommended programs will be successful in serving the Town's need to support pedestrian activity. The following programs were suggested by members of the Steering Committee and by the NCDOT Division of Bicycle and Pedestrian Transportation.



Safety Education Programs

School-based programs that stress safety, should be implemented regularly, particularly for young children. The promotion of 'walking to school initiatives' will raise public awareness of child safety and instruct children in the proper usage of sidewalk and other pedestrian facilities, whether walking to school or to the school bus stop. The local police departments typically provide such programs as this. Police officials go to the schools and educate children on the proper use of sidewalks and street crossings. In particular, young pedestrians need instruction on how to cross streets safely and how to interact properly with vehicle traffic.

Encouragement and Promotion

There are many initiatives that can be implemented by the Town of Jefferson to promote pedestrian activity. Likewise, health-based organizations, employers and civic organizations should offer incentive programs to encourage walking and physical fitness in general. Programs such as 'walk to school days' and 'visiting area walking facilities' can not only encourage walking, but also allow residents to use areas they may not know are available.

Special events also help promote walking. These activities, which typically bring the community together, are usually in the form of annual festivals or celebrations.

Other means to encourage and promote Jefferson as a walkable community include:

- Publish and distribute a Jefferson walking guide brochure that covers the area's history, safety tips, suggested walking routes and pedestrian rights and responsibilities
- Promote neighborhood walks, and nature walks
- Promote walk-for-health programs with local churches, businesses and recreation centers.
- Organize walk-to-work days and weeks.
- Work with the County to develop a historic walking tour under the auspices of the Blue Ridge National Heritage Area program (High County Council of Governments)
- Work with the County Health Department to develop health and recreation walking programs





Enforcement Programs

One of the more prominent issues that the Town of Jefferson has with *vehicular* versus *pedestrian* traffic is with enforcement of the laws. For many decades, the law has stated that pedestrians have the right-of-way; but many drivers ignore this law. To ensure safety, this law must to be enforced. The enforcement of speed limits is another important issue related to pedestrian safety. Studies have proven that motorists' speeds are directly proportional to the number of pedestrian deaths that occur. Reduced speeds provide more opportunity for pedestrians to see and react in a timely manner. Pedestrians will feel unsafe and will be reluctant to use sidewalks in areas where traffic laws are not enforced. Residents should be encouraged to report problems with safety issues to the police department.

- END OF SECTION -



Section 7

Implementation

7.1 OVERVIEW

Section 4 of the Jefferson Pedestrian Plan provided a vision for a comprehensive pedestrian system for the Town of Jefferson. Section 7 of the Plan provides a blueprint for the Town of Jefferson to assist them in implementing that vision. Section 7 identifies opportunities and strategies that will assist in fulfilling of the plan and provides a series of action steps to guide the Town as it begins to execute the Plan. The projects proposed in Section 4 are prioritized in this section in order to present the Town with a project schedule that is manageable. Non-construction projects are also listed, along with staff responsibilities. This section closes with ideas and sources for funding the projects.

7.2 OPPORTUNITIES AND STRATEGIES

An opportunity is a situation or condition that is favorable for the attainment of a goal. The most obvious of the opportunities for the Town of Jefferson in attaining the goals set out in this Plan, is the already existing network of pedestrian facilities. The existing facilities consist of a small network of sidewalks and destination points which are already attracting pedestrian traffic. The fact that people are already using the limited facilities available makes it easier to promote the expansion of the network into a comprehensive, connected and safe pedestrian system.

A strongly committed group of individuals interested in the development of a pedestrian network for the Town of Jefferson provides another opportunity or favorable condition for attaining the stated goals of this plan. Members of the steering committee, Town employees and users of the existing pedestrian network provide Jefferson with a core group of advocates who can promote the plan and recruit needed volunteers and supporters.

Regional initiatives such as those being promoted by the Blue Ridge National Heritage Area and Ashe County are providing the Town of Jefferson with additional destination points for both residents and visitors. By embracing these initiatives and working with these regional organizations, the Town can find alternate funding sources, connect to regional pedestrian and greenway systems and increase community support.





7.3 ACTION STEPS

In order to implement the Jefferson Comprehensive Pedestrian Plan, the following steps need to be taken.

- **Adoption of the Plan.** The first step in implementing the Pedestrian Plan is the adoption of the plan by the Town of Jefferson Board of Aldermen. Adoption of the plan will allow the Town of Jefferson to effectively influence regional decisions so that they coincide with the goals set forth in the plan. Adopting the plan will also provide the Town with greater authority to shape local land use decisions.
- **Create an Oversight Committee.** An Oversight Committee consisting of Town Staff, interested citizens and representatives from interested organizations (such as Ashe County and the local historical society) will oversee the implementation of the plan.
- **Develop a funding strategy.** In order to undertake the proposed projects and secure adequate funding it will be necessary to develop a funding strategy. The strategy should allow the community to incrementally complete each of the suggested pedestrian facility improvements over a 10 year period. Opportunities are listed below:
 1. *The capital improvement program needs to include yearly appropriations for sidewalk, crosswalk and greenway development.*
 2. *The annual operating budget needs to include monies for minor construction and maintenance of pedestrian facilities.*
 3. *Actively pursue the addition of roads within the Town to NCDOT's TIP program for sidewalk and greenway development and improvement.*
 4. *Community Development Block Grants (CDBG) can provide money for capital improvements such as sidewalks and greenways in low-income neighborhoods.*
 5. *Pursue funding from the sources listed in Section 7.8 Funding Opportunities.*
 6. *Consider issuing a local municipal bond with monies allocated towards the pedestrian system.*



- Begin work on the projects listed as High Priority in Section 7.4
- Develop education and awareness programs. These programs will help to inform the public about and increase support for the proposed projects.
- Develop a plan for acquiring the land and easements necessary for the Jefferson Greenway.
- Work with other government agencies such as Ashe County, West Jefferson, the High Country Council of Governments and the State of North Carolina to integrate Jefferson's Pedestrian Plan with other transportation, land use, economic development, parks and recreation, environmental and community planning efforts.
- Modify the Town of Jefferson's Zoning Ordinances to contain strong, well thought out policies and goals that will promote the development of pedestrian facilities as part of any new development or redevelopment.
- Scheduled road or utility work should include improvements and additions to the adjacent pedestrian network where possible.
- Identify supporting policies and guidelines. The NCDOT Division of Bicycle and Pedestrian Transportation have published a guidebook on General Statutes, Ordinance and Resources towards bicycle and pedestrian laws. This is a great resource pertaining not only to responsibilities for bicyclists and pedestrians, but also for motorists. This guide should be incorporated into the standards for the Town of Jefferson. It is particularly valuable for educating school children on public safety.

As mentioned in previous sections of this document, the street design guidelines need to conform to NCDOT standards. In addition to NCDOT standards, the Manual on Uniform Traffic Control Devices (MUTCD) should also be a reference for projects, particularly existing roadways that have not conformed to these standards. Areas such as traffic intersections will need to incorporate these guidelines for future improvements.

The American Association of State Highway and Transportation Officials (AASHTO) have published the 'Guide for the Planning, Design and Operation of Pedestrian Facilities'. The purpose of this guide is to provide assistance with the planning, design and operation of pedestrian facilities along streets and highways.





Specifically, the guide focuses on identifying effective measures for accommodating pedestrians on public right-of-ways. This useful tool can be used to provide user-friendly pedestrian facilities along roadways.

- Develop an evaluation/monitoring process. Each year the Town should evaluate the progress made in implementing proposed improvements suggested in this Pedestrian Plan. This evaluation should not only include new facilities but also repair to existing facilities. At the beginning of budget process for the next fiscal year, the Town should determine the projects to be implemented for that year. In some cases there may be large projects that will limit the number of tasks the Town can feasibly commit to implementing.

7.4 PRIORITIZATION OF THE PROPOSED PEDESTRIAN NETWORK

The Proposed Facility Priority Maps and Project List can be found in the Appendix. The maps suggest priorities for the construction of pedestrian facilities located within the Town limits. In addition to prioritization, the list delineates the location, length, cost and potential funding means for each project. As mentioned earlier in this section, sidewalk improvements make up the majority of project costs for the proposed improvements. The priorities established are based primarily on need and demand.

The Town of Jefferson and NCDOT are the primary agencies that will be involved with these pedestrian improvements. Many of these facilities are located on NCDOT public right-of-ways and are eligible to receive funding for NCDOT improvements. As new development or redevelopment occurs, it will be important for the Town of Jefferson to require the owners to implement the appropriate pedestrian facilities, as necessary.

Prioritization of Projects

The priorities of the pedestrian plan are divided into three different categories of priorities: high, medium and low. The following chart lists the projects and their locations for each category of priority.



High Priorities

Location	Project Description
West Main Street (NC-88) – south side	Install sidewalk along south side of new NCDOT street. Include curb ramps at all intersections.
South Main Street (Business 221)	Install missing section of sidewalk and retaining wall
North Main Street	Install missing section of sidewalk
East Main Street (Business 221) - north side	Install missing section of sidewalk
East Main Street (Business 221) - north side	Install sidewalk across parking lot
East Main Street (Business 221) – south side	Repair/replace broken and spalled sections of sidewalk
East Main Street (Business 221) – south side	Extend sidewalk to Tyson Park. Install curb ramps at all intersections.
East/West Main St and North/South Main St	Install four crosswalks at intersection, add pedestrian signal to existing traffic signal.
East Main Street (Business 221) @ Tyson Park	Install crosswalk and curb ramps across East Main Street
East Main Street (Business 221) @ Hospital Dr.	Install crosswalk and curb ramps across East Main Street
US Rte 221 @ Government Circle	Install crosswalk across US Rte 221. Install pedestrian and traffic signals. Install necessary curb ramps.

Safety is the major reason for placing projects into the High Priority category. Some of the issues faced are:

- Missing segments of sidewalk that force pedestrians out onto roads with a high volume of traffic traveling at 45 mph.
- A lack of crosswalks at busy intersections that are commonly traversed by pedestrians.
- Broken and uneven sidewalks that present tripping hazards to pedestrians.

Planned NCDOT projects in the Town of Jefferson were also taken into consideration when developing the priorities lists.

High priority projects need to be addressed within the first five years of the plan.



Moderate Priorities

Location	Project Description
South Main Street (Business 221)	Extend sidewalk to intersection of East/West Main St. Install curb ramps at corner.
North Main Street	Install sidewalk across parking lots to intersection of East/West Main St. Install curb ramps at corner.
Long Street	Install sidewalk along north side of Long St. Install crosswalk and refuge island at intersection with South Main Street. Install curb ramps as needed.
Ashe Street	Install sidewalk along one side of street. Install curb ramps.
Court Street	Install sidewalk along south side of street from Ashe St. to Ivy St. Install curb ramps.
Ivy Street	Install sidewalk along one side of Ivy Street from Court St. to East Main St. Install 1 across East Main St at Ivy St. and 1 crosswalk across Ivy St. on north side of Main. Install curb ramps.
Hospital Drive at Mountain Village Shopping Center	Install sidewalk approximately 200' north along Hospital Dr. and then along shopping center entrance to stores. Install crosswalk across Hospital Drive at entrance. Install curb ramps.
US Rte 221	Build Phase I of Jefferson Greenway from Long St. to Tyson Park
East Main Street (Business 221)	Install crosswalk across East Main Street at 1904 Courthouse. Install curb ramps.
US Rte 221 @ Academy Street	Install a crosswalk and pedestrian signal at intersection. Install curb ramps.

Moderate priority projects are designed to create a cohesive pedestrian network from the existing system. Some of the projects fill in missing gaps in the network, while others address additional safety issues that arise from the expansion of the network. Existing high use pedestrian areas such as Ashe Street were added to this category because there are no pedestrian-dedicated facilities along this popular walking route.

Moderate priority projects need to be addressed within the first ten years of the plan.



Low Priorities

Location	Project Description
West Main Street (NC-88) – north side	Add sidewalks along north side of West Main St. to Town Limits. Install curb ramps at all intersections.
McConnell Street	Install sidewalk along one side of McConnell St. Install crosswalk across West Main at intersection with McConnell. Install curb ramps.
Badger Street	Install sidewalk along one side of Badger Street to Town Limits.
South Main Street (Business 221)	Extend existing sidewalk west across parking lot to Town Limit. Install a crosswalk, curb ramps and refuge island across South Main between Badger St. and ethnic grocers.
Northwest Drive	Install sidewalk along one side of street. Install crosswalk across West Main St. at intersection with Northwest Drive.
North Main Street	Replace existing sidewalk with 5' walk and barrier. Extend sidewalk north to Town Limit. Install curb ramps at intersections.
Martin Street	Install sidewalk along one side of street. Install curb ramps as necessary.
Wiley Street	Install sidewalk along one side of street. Install curb ramps as necessary.
Hamilton Drive	Install sidewalk along one side of street. Install curb ramps as necessary.
East Main Street (Business 221) – north	Repair or replace damaged/sunken sidewalks. Install crosswalk and curb ramps across Cherry Street.
East Main Street (Business 221) – south	Repair or replace damaged sunken sidewalks. Connect disparate sections of sidewalk together. Install sidewalk across existing parking lots.
Academy Street (south side of US Rte 221)	Install sidewalk along one side of street. Install curb ramps as necessary.
US Rte 221 @ East Main Street (Business 221)	Install a crosswalk across US Rte 221. Add a pedestrian signal to the existing traffic signal.
US Rte 221	Phase II and III of Jefferson Greenway.

The final category is the low priority areas. These areas are important to the Town but due to economic factors, it is not feasible to implement the facilities within a 10-year time period. These facilities are located primarily in residential neighborhoods and connect



to other existing/proposed sidewalks that are of high or moderate priority. A long-range time period will be allowed for the implementation of pedestrian facilities in the low priority areas. As different areas in and around the Town of Jefferson develop, priorities may change in the coming years.

The proposed improvements incorporate planning initiatives of other agencies that affect the Town of Jefferson. NCDOT and the High Country Council of Governments planning initiatives (such as the improvements to NC-88 and the County History Museum/Visitor's Center) are discussed in this Pedestrian Plan. It will be essential to continue cooperation with these and other entities that can enhance the pedestrian network within the Town of Jefferson and the surrounding communities. As additional needs are identified in the future, communication with these agencies will help with the coordination of future projects.

The Jefferson Pedestrian Plan proposes numerous pedestrian projects composed mainly of sidewalks, multi-purpose trails and spot improvements. In order to develop an action plan that is manageable, the recommendations have to be separated into multiple projects that will be implemented on an annual basis. Each fiscal year, the Town should identify specific projects and allocate funding for them. There are numerous funding mechanisms to assist with costs. This will be an important component in the completion of the identified projects.

Sidewalk Projects

The majority of the proposed improvements for the Jefferson Pedestrian Plan consist of the repair or construction of concrete sidewalks. These are considered to be *on-road construction projects*. A priority list identifying sidewalks can be found in the Appendix. Standards for the construction of the sidewalk projects can be found in Section 5: Design Guidelines. As many of the proposed facilities are located on NCDOT roadways, the Town of Jefferson will need to receive an approval for all permitting and construction documents for this work *prior* to construction.

The Jefferson Greenway

Multi-purpose trails such as the proposed Jefferson Greenway are designated as *off-road construction projects*. These trails are typically 8 to 10 feet wide and allow for biking, which is not permitted on sidewalks. This pedestrian plan proposes a new greenway trail that travels along the US Route 221 corridor.



The approximate cost for construction of the proposed Jefferson Greenway is \$360,000. This is a significant amount of money; but this popular amenity can come to fruition by partnering with other agencies and investigating creative funding

7.5 ANCILLARY FACILITIES AND PROGRAMS

There are many ancillary facilities and programs that Jefferson can initiate or participate in. Many of these initiatives are relatively inexpensive. Signing/mapping projects and safety/enforcement programs, can be performed through in-house services. Partnering with other organizations such as the Ashe County Transportation Authority, the High Country Council of Governments, civic groups and health-based companies will allow promotional programming and transit interface programs.

Expanded Transportation Options

The Town of Jefferson needs to work with the Ashe County Transportation Authority to expand the existing network of bus stops and bus routes to better serve the citizens of the Town. The current bus route provides many opportunities for increasing the number and location of bus stops. This increase in the bus network would help to relieve pedestrian pressure at some of the most dangerous areas such as Government Circle and US Route 221.

Education Programs

Several state and national program guidelines are available for educating the public about pedestrian safety. These programs are aimed at law enforcement, pedestrians and drivers. Even though there are no schools located within the town limits of Jefferson, there are school-aged children living in the Town. The Town of Jefferson should work with the Ashe County School System and the Jefferson Police Department to provide safety programs related to walking for the children and adults of Jefferson. Some of the resources available for use are:

National Center for Safe Routes to School – The Center offers a number of resources and information on how to start a Safe Routes to School program.





Walking School Bus – A program under the auspices of the National Center for Safe Routes to School. The program combines safety, community building, healthy exercise and fun to help educate children and adults on pedestrian safety.

A Guide to the North Carolina Bicycle and Pedestrian Laws – The guide is intended for use by law enforcement officials, educators, planners and citizens for education about and enforcement of North Carolina pedestrian laws.

Healthy Communities Program

The Town of Jefferson, the Ashe County Health Department and the Ashe Memorial Hospital should join to develop and promote a Healthy Communities Program. This program would recruit churches, civic organizations and neighborhood associations to organize and promote walking for better health. The program should also include pedestrian education.

Wayfinding

As pedestrian facilities are completed they need to be incorporated into the Wayfinding System for Jefferson. Maps of primary pedestrian corridors can be made available at local government and retail centers. A uniform system of signage should be installed to direct pedestrians to destination points. Traffic signs should be installed that alert motorists to the pedestrian network (see Section 5: Design Guidelines.)

Spot Improvement and Maintenance Program

The Spot Improvement and Maintenance Program is most likely to be the responsibility of the Town of Jefferson Maintenance Department. The Department needs to develop a regular schedule of inspection and repair to the various elements of the pedestrian network. In addition, the Department can make several of the spot improvements on the proposed project list. Some of the tasks that can be undertaken by the Maintenance Department include:

- Repairing/installing small areas of sidewalk or multi-purpose trail
- Repair of retaining walls
- Install, repair or replace signage
- Remove or supervise removal of litter
- Maintain landscaping



7.6 STAFFING

The Town Manager and supporting staff will serve as the major leaders for the development of Jefferson's pedestrian system. This department will guide the Town in the planning, design, construction and funding of pedestrian facilities. The Town Manager's office will also facilitate cooperation between the various agencies as mentioned in Section 7.5.

The Town Maintenance Department will be a vital component in the implementation of projects and in the maintenance of those facilities that are the Town's responsibility. The Planning Board and Town Aldermen will also be advocates of pedestrian planning. Each fiscal year the Town should implement pedestrian improvements as part of the Town's general budget.

The Pedestrian Steering Committee was an integral component in developing recommendations for the Pedestrian Plan. It is recommended that an ongoing Oversight Committee be created to evaluate the pedestrian facilities and programs on an annual basis. An evaluation program is too comprehensive for just one individual to perform; such a program will require a group working together to conduct the evaluation. The Oversight Committee could also be responsible for recruiting volunteers and civic groups to assist with programming, publicity and simple maintenance tasks such as litter removal. Maintenance issues and problems can often be addressed through this committee and it can assist the Town with complaints from local residents and visitors.

The Jefferson Police Department will assume tasks concerned with pedestrian safety. This includes education, enforcement of traffic and pedestrian laws and crime prevention. The Department should also maintain a record of all incidents involving pedestrians in order to address necessary improvements to the pedestrian network that might develop after the adoption of this plan.

7.7 FUNDING

Funding for the implementation of proposed projects can be overwhelming with rising construction costs. Therefore, prioritization will aid in the completion of the proposed tasks. The probable construction cost estimates for all the proposed projects is projected at \$1,190,160. A listing of the projects, their priority status and probable costs is listed in Priorities and Cost Estimates, found in the Appendix, pages VI and VII. With a very talented and capable Town Staff, Jefferson has the ability to accomplish many of the proposed improvements itself. Spot improvements such as ADA compliant curb ramps, repair to damaged sidewalks and small sidewalk projects can be accomplished by Town





Staff, which will dramatically decrease the costs of these projects. The cost of the sidewalk applications will vary depending upon the choice of contractor, the scope of the project and the cost of materials. The probable costs associated for implementing this work is \$688,560 for all sidewalk improvements with an additional \$130,000 for crosswalk and pedestrian signal improvements.

Probable costs for the Jefferson Pedestrian Plan projects is broken down thusly:

Priority	Sidewalks	Pedestrian Crossings	Special Projects
High	\$86,760	\$74,000	Retaining Wall \$15,600
Moderate	\$101,925	\$28,000	Phase I, Jefferson Greenway \$110,450
Low	\$499,875	\$28,000	Phase II and III Jefferson Greenway \$245,550
Total	\$688,560	\$130,000	\$371,600

Funding will be a large component in the process of developing Jefferson's pedestrian facilities. The Town will need to be aggressive in applying for funding every year for individual projects. This can be a combination of grants, contributions, bonds and other methods. The cost of curbs, ramps, crosswalks, pedestrian signals and traffic signals can be shared with NCDOT. In addition, proposed improvements that are a part of a larger NCDOT project can be funded as an "incidental" project by NCDOT.

Grants in particular, will be an important mechanism for funding. The projects, which are to be submitted for grants need to reflect the objectives specified with each individual grant. Grants are typically oriented toward connectivity to a particular objective such as schools, education, recreation or safety.

A variety of funding opportunities are available to Jefferson as the Town prepares for future improvement/development of its pedestrian system. Following is a list of funding sources that have been utilized by other communities for pedestrian projects. Each of these will be addressed in this section.

- Taxation
- Bonds
- Grants



- User Fees
- Contributions
- Foundations

Taxation

Traditionally, *ad valorem tax revenue* has been the primary source of funding for the pedestrian facilities of properties/facilities owned by municipalities and counties. 'Pedestrian opportunities' are considered a public service and often are standard line items on general fund budgets. Creative financial opportunities are possible; however, *ad valorem* taxes will continue to be the major revenue source to support the system. As such, communities often vote to raise their local tax rate temporarily in support of their pedestrian systems.

Bonds

Many communities issue *bonds*, which are typically approved by the shareholders, to finance site development and land acquisition costs. The State of North Carolina grants municipal governments the authority to borrow funds through the issuance of bonds, the amount of which is not to exceed the cost of acquisition or the cost for improvement of pedestrian facilities. Total bond capacities for local governments (for pedestrian facilities) are limited to a maximum percentage of assessed property valuation. Since the issuance of bonds relies on the support of the voting population, the implementation of awareness programs is absolutely essential *prior* to a referendum vote. This method can be used for specific projects such as the creation multi-purpose trails within a greenway.

Grants

State and federal agencies offer numerous *grants* to assist municipalities in the financing of their pedestrian projects. This source of funding should definitely be investigated and pursued by the Town of Jefferson for present and future improvements.





State Agencies

Traffic Improvements Program (TIP)

NCDOT has established priorities that are addressed in the 2006-2015 Traffic Improvements Program (TIP). The projects are identified within the "Region D" thoroughfare plan, which includes Ashe County (as published in September, 1993). The program identifies long-range projects of varied scopes, small to multi-million dollar facility improvements. The projects identify location, phase and schedule.

Pedestrian facility projects are divided into two categories within the TIP, independent projects and incidental projects. Independent projects are those which are not related to a 'scheduled' highway project. Incidental projects are those related to a 'scheduled' highway project.

NCDOT Transportation Improvement Program (TIP) - Independent projects:

\$6 million is appropriated annually for the construction of pedestrian and bicycle improvements that are independent of scheduled highway projects in communities throughout the state. 80% of these funds are derived from the Surface Transportation Program (STP) - Enhancement Funds, while state funds make up the remaining 20%. Currently, \$1.4 million is appropriated annually for pedestrian hazard elimination projects in the NCDOT highway divisions. \$200,000 is allocated for the Division of Bicycle and Pedestrian Transportation for projects such as training workshops, pedestrian safety and research projects, and other pedestrian needs statewide.

NCDOT Transportation Improvement Program (TIP) - Incidental projects:

Bicycle accommodations, such as bike lanes, widened shoulders and safety-designed bridges are frequently included as incidental features of highway construction projects. In addition, bicycle-safe drainage grates are a standard feature of all highway construction. Most pedestrian safety accommodations built by NCDOT are included as part of scheduled highway improvement projects and funded with a combination of federal and state roadway construction funds.

Governor's Highway Safety Program (GHSP)

GHSP funding is provided through an annual program, upon approval of specific project requests, to undertake a variety of pedestrian and bicycle safety initiatives. Amounts of



GHSP funds vary from year to year, according to the specific amounts requested. The GHSP plans and supports several highway safety programs annually. 'Click It or Ticket' began in 1993 and has become the national model for an enforcement and education campaign (bearing the same name), which is operated by the National Highway Traffic Safety Administration. All funding from the GHSP is allocated for highway safety purposes only. The funding provided from this program has been described as 'seed money', which is money that is needed to get programs started. The grantee is expected to provide a portion of the project cost and is expected to continue the program after GHSP funding expires.

Powell Bill Funding

The Powell Bill or the North Carolina Street-Aid Allocations to Municipalities is a program of the North Carolina Department of Transportation. Allocations are made annually to municipalities that establish their eligibility and qualify as provided by G.S. 136-41.1. through 136-41.3. These funds can be used for planning, construction and maintenance of sidewalks along public streets and highways.

North Carolina Parks and Recreation Trust Fund (PARTF)

PARTF was established for local governments and the North Carolina Division of Parks and Recreation in 1994 as a funding source for the development and/or improvement of parks and recreation facilities, as well as for the purpose of land acquisition. A state-funded program, PARTF matches monies spent by municipalities on parks and recreation, with each sharing 50% of the cost. In 2004, the fund request was elevated from a maximum of \$500,000 to \$1,000,000. The Recreational Resources Service should be contacted for additional information at (919) 515-7118.

Eat Smart, Move More – North Carolina

'Eat Smart, Move More' is a statewide initiative that promotes increased opportunities for physical activity and healthy eating through policy and environmental change. The program advocates public awareness of the need for changing lifestyles in today's culture. This program assists in funding for projects such as walking facilities, interpretative trails, educational amenities and master planning.

Clean Water Management Trust Fund (CWMTF)

Created in 1996 by the North Carolina General Assembly, the Clean Water Management Trust Fund (CWMTF), grants monies to local governments, state agencies and not-for-profit conservation groups to help finance projects that specifically address water pollution





issues. CWMTF will fund projects that contribute toward a network of riparian buffers and greenways for environmental, educational and recreational benefits. There is no match required from local municipalities for CWMTF funds; however, the “suggestion” of a match is highly recommended.

Federal Transportation Enhancement

Though a Federal Government program, this grant is administered through the North Carolina Department of Transportation Enhancement Unit. This fund is meant to strengthen the cultural, aesthetic and environmental aspects of the intermodal transportation system in the United States. Projects must benefit the traveling public and help communities increase transportation choices and access, enhance the built or natural environment and create a sense of place. Projects promoting pedestrian and bicycle systems and safety are eligible for this grant.

Federal Agencies

Vision 2020

In an effort to increase the physical activity of North Carolina residents (thereby improving medical problems induced by nutritional habits), the Center for Disease Control and Prevention has initiated the ‘Start with your Heart’ program. This program has the support of the Appalachian District Health Department and the NCDOT.

The Safe, Accountable, Flexible, Efficient, Transportation Equity Act of 2004 (SAFETEA)

The Safe, Accountable, Flexible, Efficient, Transportation Equity Act of 2004 (SAFETEA), approved by the federal government in 2004, is a primary source for financing bicycle, pedestrian and greenway projects throughout the country at both the local and state levels. Providing as much as 80% for development and construction costs, this grant is earmarked for facilities such as sidewalks, rail-trails, bike-lanes and greenways. Primarily, municipalities use the Enhancement Program (a section of SAFETEA), since this section focuses on bicycle and pedestrian corridors, environmental mitigation, historic preservation and scenic byways. Applicants are required to provide a 20% match of requested funds. Prior to applying for this grant, a through engineering assessment should be performed to determine construction costs.



Community Development Block Grant (CDBG)

The CDBG is an extremely flexible grant program that provides communities with funding resources to address a wide range of unique community development needs. The program is administered through the United States Department of Housing and Urban Development (HUD). Formed in 1974, the CDBG program is one of the oldest continuing HUD programs in existence. The CDBG program provides annual grants for facility and infrastructure improvements to assist in revitalization and job retention within communities.

Public Works and Economic Development Program

This program is administered by the Economic Development Administration for the US Department of Commerce. Public Works and Economic Development investments help support the construction or rehabilitation of essential public infrastructure and facilities necessary to generate or retain private sector jobs and investments, attract private sector capital and promote regional competitiveness. This includes investments that expand and upgrade infrastructure to attract new industry, support technology-led development, redevelop brownfield sites and provide Eco-industrial development.

Rivers, Trails and Conservation Assistance (RTCA)

The National Park Service (NPS) provides this program of advisory services and counseling. The NPS works with community groups and local and state governments to conserve rivers, preserve open space and develop trails/greenways. No fixed amount is established for these services. Cooperators must demonstrate a commitment for cost-sharing, which may include donations of time, cash and services. NPS Rivers and Trails has played a major role in community conservation/recreation through citizen-led, partnership approaches to river protection, trail development and land conservation.

Land and Water Conservation Fund (LWCF)

A federally-funded program, LWCF, was established for local and state governments in 1965 as a funding source for outdoor recreation development and land acquisition. LWCF monies are derived from the sale or lease of nonrenewable resources, primarily offshore oil/gas leases and surplus federal land sales. Acquisition and development grants may be used for a wide variety of outdoor projects such as city parks, tennis courts, bike trails, outdoor swimming pools and support facilities (roads, water supply, et cetera). Facility design must be basic in nature (as opposed to elaborate) and must remain accessible to the general public. No more than 50% of the project cost may be federally funded by LWCF, although all or part of the project sponsor's matching share may be obtained from certain other federal assistance programs. The federal government has proposed no funding for this program for the fiscal year 2006.





Recreation Trails Program

The Recreation Trails Program (RTP) is an assistance program of the Department of Transportation's Federal Highway Administration (FHWA). RTP makes recreation funds available for state allocation, to develop and maintain recreation trails and trail-related facilities for both non-motorized and motorized recreation trail users. RTP funds are distributed to states by a legislative formula: half of the funds are distributed equally among all states and half are distributed in proportion to the estimated amount of non-highway recreational fuel used in each state. (Non-highway recreational fuel is the type that is typically used by snowmobiles, all-terrain vehicles, off-road motorcycles and off-road light trucks.)

Watershed Protection and Flood Protection

The USDA Natural Resource Conservation Service (NRCS) assists state and local governments in their operation and maintenance of watersheds, whose areas are less than 250,000 square acres. The NRCS provides both financial and technical assistance for eligible projects for the improvement of watershed protection, flood prevention, sedimentation control, public water-based fish and wildlife enhancements and recreation planning. The NRCS requires a 50% local match for public recreation and fish/wildlife projects.

Contributions

The solicitation of *contributions* is an acceptable method of fund-raising for pedestrian improvements. These donations, typically in the form of land, cash, labor or materials, can be solicited to assist the Town of Jefferson with the enhancement of its pedestrian system. Corporations, civic organizations, individuals and other groups generally donate to a specific pedestrian project; however, donations may also be solicited for multiple project improvements or additions. Private, nonprofit, tax-exempt foundations such as the Community Foundation of Western North Carolina, are often used as a means of accepting and administering private gifts to a public entity.

Foundations

Foundations are another source of financing that allows direct contributions to be made within communities, states or the nation. These types of funds are usually described as special program foundations, general-purpose foundations or corporate foundations. Foundations generally have very few restrictions or limitations and are typically received from local entities. One example of such a foundation is the Cannon Foundation, Inc.



Partnerships

To implement the recommendations contained in the comprehensive pedestrian plan, Jefferson will most certainly have to expand their partnership agreements with other public agencies and private-sector organizations. There are many different types of partnerships that can be formed to achieve the goals established by the Town. In fact, many local governments throughout the nation are utilizing partnerships with public and private-sector interests to accomplish community goals.

Listed below are the various types of partnerships that the Town should consider in its efforts for the improvement of pedestrian facilities:

- Programming partnerships to co-sponsor events and facilities or to allow qualified outside agencies to conduct activities on properties, which are municipally-owned.
- Operational partnerships to share the responsibility for providing public access and use of facilities.
- Development partnerships to purchase land and/or build facilities.
- Management partnerships to maintain properties and/or facilities.
- Elected officials should become advocates for pedestrian facilities and promote the development of future improvements.

The Town of Jefferson is currently “partnered” with several entities in other Town-related endeavors/functions and should evaluate forming additional partnerships, which address the needs of the pedestrian system.

NCDOT will be a very important partner as more facilities are developed in the area. Many of the proposed improvements involve NCDOT. It will be imperative that this partnership has good communication and coordination for the efficient implementation of projects.

Direct requests should be made to potential partners, asking them to meet to evaluate the possible benefits of partnering. This step should be made to generate interest and agreement *prior* to solidifying any responsibilities for each participating party.





Land Acquisition and Development

There are many different types of *land acquisition* available to the Town of Jefferson for the pedestrian system expansion and/or future development. Due to the land costs, as well as land availability, it is recommended that the Town prioritize the property to be acquired for facilities regarding multi-purpose trails, which are typically off-street facilities. Listed below are several methods for acquiring and developing multi-purpose trails:

Local Gifts

Donations of land, money, labor or construction can have a significant impact on the acquisition and development of pedestrian facilities. The solicitation of local gifts is highly recommended and should be organized thoroughly, with the utilization of very specific strategic methods. This often (untapped) source of obtaining funds requires the contacting of potential donors such as individuals, institutions, foundations, service clubs, et cetera.

Life Estate

A life estate is a gift whereby a donor retains the land during his/her lifetime and relinquishes title of the property after his/her death. In return, the owner (or family) is relieved of property tax for the given land.

Easement

An easement is the most common type of “less-than-fee” interest in land. An easement seeks to compensate the property owner for the right to use his/her land in some way or to compensate for the loss of his/her privileges to use the land. Generally, the land owner may still use the land and therefore continues to generate property tax revenue for the municipality.

Fee Simple Purchase

Fee simple purchase is the most common method used to acquire municipal property for pedestrian facilities. Although it has the advantage of simplifying justification to the



general public, fee simple purchase is the most difficult method to pursue, due to limited monetary resources.

Fee simple with lease-back or resale

This method allows municipalities to acquire land by fee simple purchase, yet allows them to either sell or lease the property to prospective users with restrictions that will preserve the land from future development. The fee simple with lease-back or resale method of development commonly results from situations in which land owners who have lost considerable monetary amounts in property value, determine that it is more economical to sell the land to the municipality (with a lease-back option) than to keep it.

Long-term option

Long-term options allow municipalities to purchase property over a long period of time. This method is particularly useful because it enables the municipality to consider particular pieces of land that may have future value, though it is not currently desired or affordable at the time. There are several advantages to this method of property acquisition: the town can protect the future of the land without purchasing it upfront and meanwhile, the purchase price of the land will not increase, with the town having the right to exercise its option. The disadvantage to the town is that all privileges relinquished by the land owner require compensation in the form of securing the option.

Identify Special Funding Opportunities for High Priority Projects

The funding sources listed above can be used for numerous projects proposed in this plan as well as future projects. Many of these projects can be funded as enhancement projects of the TIP. The improvements along the major corridors (that have substantial construction cost) should be strongly considered. Funding for mapping and signage can be allocated through the Governor's Highway Safety Program.

It will be important to incorporate the future facilities with incidental highway projects. This document will be used by NCDOT to determine areas where pedestrian improvements should be incorporated into the proposed roadway improvements. Major construction projects may require more than grants. Although grant funding is a great resource, the amount of money available can limit the size of the project. A bond referendum could help to determine whether the Town's residents are willing to accept the cost for construction of major facilities.





The grants available for funding pedestrian facilities will evolve in the future. The funding amount for many grants may not be as much as others, while some may be very competitive because of the monies available. Partnering with other organizations typically lends more project significance when applying to funding agencies. Having multiple organizations applying for a grant, shows unity within a community, this in turn supports the grant application. In addition, having multiple partners will allow for more monies to be used for matching funds.

7.8 THE TOWN OF JEFFERSON COMPREHENSIVE PEDESTRIAN PLAN

Although a significant amount of planning was performed in developing this plan, it is only a guide for the future. As new development and growth occurs in Jefferson, new priorities may develop. The Town should continually evaluate and update the plan in order to meet the primary needs of the community. As the projects are implemented, the Town should take steps to update all involved parties in the progress being made. Additions to the plan should be formalized in order to insure continuity as stakeholders change.

- END OF SECTION -



APPENDIX

TABLE OF CONTENTS

Department of Transportation Policy Guidelines	I-III
Organization Contact List	IV-V
Cost Estimates for Construction of Pedestrian Facilities	VI-VII
Map Enlargements	VIII
Map 2.4-a: High Use Pedestrian Paths	IX
Map 2.4-b: Major Destination Areas	X
Map 2.4-c: Connectivity and Pedestrian Concerns	XI
Map 2.4-d: Police Department Concerns	XII
Map 2.8-a: Existing Pedestrian Corridors	XIII
Map 2.8-b: Additional Needed Facilities	XIV
Community Workshop Flyer	XV
Annual Average Daily Traffic Counts, 2005	XVII
Proposed Pedestrian Network Priorities Map - East	Map 5
Proposed Pedestrian Network Priorities Map - West	Map 6



Appendix

DEPARTMENT OF TRANSPORTATION PEDESTRIAN POLICY GUIDELINES

EFFECTIVE OCTOBER 1, 2000

These guidelines provide an updated procedure for implementing the Pedestrian Policy adopted by the Board of Transportation August 1993 and the Board of Transportation Resolution September 8, 2000. The resolution reaffirms the Department's commitment to improving conditions for bicycling and walking, and recognizes non-motorized modes of transportation as critical elements of the local, regional, and national transportation system. The resolution encourages North Carolina cities and towns to make bicycling and pedestrian improvements an integral part of their transportation planning and programming.

REQUIREMENTS FOR DOT FUNDING:

REPLACEMENT OF EXISTING SIDEWALKS:

The Department will pay 100% of the cost to replace an existing sidewalk that is removed to facilitate the widening of a road.

TIP INCIDENTAL PROJECTS:

DEFINED: Incidental pedestrian projects are defined as TIP projects where pedestrian facilities are included as part of the roadway project.

REQUIREMENTS:

1. The municipality and/or county notifies the Department in writing of its desire for the Department to incorporate pedestrian facilities into project planning and design. Notification states the party's commitment to participate in the cost of the facility as well as being responsible for all maintenance and liability. Responsibilities are defined by agreement. Execution is required prior to contract let.

The municipality is responsible for evaluating the need for the facility (ie: generators, safety, continuity, integration, existing or projected traffic) and public involvement.



2. Written notification must be received by the **Project Final Field Inspection (FFI) date**. Notification should be sent to the Deputy Highway Administrator - Preconstruction with a copy to the Project Engineer and the Agreements Section of the Program Development Branch. Requests received after the project FFI date will be incorporated into the TIP project, if feasible, and only if the requesting party commits by agreement to pay 100% of the cost of the facility.

3. The Department will review the feasibility of including the facility in our project and will try to accommodate all requests where the Department has acquired appropriate right of way on curb and gutter sections and the facility can be installed in the current project berm width. The standard project section is a 10-ft berm (3.0-meter) that accommodates a 5-ft sidewalk. In accordance with AASHTO standards, the Department will construct 5-ft sidewalks with wheelchair ramps. Betterment cost (ie: decorative pavers) will be a Municipal responsibility.

4. If the facility is not contained within the project berm width, the Municipality is responsible for providing the right of way and/or construction easements as well as utility relocations, at no cost to the Department. This provision is applicable to all pedestrian facilities including multi-use trails and greenways.

5. A cost sharing approach is used to demonstrate the Department's and the municipality's/ county's commitment to pedestrian transportation (sidewalks, multi-use trails and greenways). The matching share is a sliding scale based on population as follows:

MUNICIPAL POPULATION	DOT PARTICIPATION	LOCAL PARTICIPATION
> 100,000	50%	50%
50,000 to 100,000	60%	40%
10,000 to 50,000	70%	30%
< 10,000	80%	20%

Note: The cost of bridges will not be included in the shared cost of the pedestrian installation if the Department is funding the installation under provision 6 - pedestrian facilities on bridges.

6. For bridges on streets with curb and gutter approaches, the Department will fund and construct sidewalks on both sides of the bridge facility if the bridge is less than 200 feet in length. If the bridge is greater than 200 feet in length, the Department will fund and construct a sidewalk on one side of the bridge structure. The bridge will also be studied to determine the costs and benefits of constructing sidewalks on both sides of the structure.



If in the judgement of the Department sidewalks are justified, funding will be provided for installation. The above provision is also applicable to dual bridge structures. For dual bridges greater than 200 ft in length, a sidewalk will be constructed on the outside of one bridge structure. The bridges will also be studied to determine if sidewalks on the outside of both structures are justified.

7. FUNDING CAPS are no longer applicable.

8. This policy does not commit the Department to the installation of facilities in the Department's TIP projects where the pedestrian facility causes an unpractical design modification, is not in accordance with AASHTO standards, creates an unsafe situation, or in the judgement of the Department is not practical to program.

INDEPENDENT PROJECTS

DEFINED: The DOT has a separate category of funds for all independent pedestrian facility projects in North Carolina where installation is unrelated to a TIP roadway project. An independent pedestrian facility project will be administered in accordance with Enhancement Program Guidelines.





ORGANIZATION CONTACT LIST

Organization	Representative	Position	Address	City, Zip	Phone
Town of Jefferson	Cathy Howell	Town Manager	P.O.Box 67	Jefferson, NC 28604	(336)846-9368
	Roger Miller	Utilities	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	David Neaves	Chief of Police	P.O. Box 67	Jefferson, NC 28604	(336)846-5529
Board of Aldermen	Dana Tugman	Mayor	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	Blueford Eldreth	Mayor Pro Tem	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	Mark Johnston	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	Junior Anderson	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	Max Yates	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	Charles Caudill	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
Town Planning Board	Toy Campbell	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	Gwen Ashely	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	John Shepard	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	Bobby Bear	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
	Jennette Little	Board Member	P.O. Box 67	Jefferson, NC 28604	(336)846-9368
Ashe County Chamber of Commerce	Carol Coulter	President	P.O. Box 31	W. Jefferson, NC 28694	(336)846-9550
Ashe County Transportation Authority	Sue Thompson	Director	P.O. Box 1836	W. Jefferson, NC 28694	(336)846-2000
NCDOT - Division of Bicycle & Pedestrian Transportation	Robert Mosher	Planning Program Manager	1552 Mail Service Center	Raleigh, NC 27699	(919)807-0773
NCDOT - Division 11	Doug Tetzlaff	District Engineer	P.O. Box 250	N. Wildesboro, NC 28659	(336)903-9146
	Wayne O. Atkins	Division Operations Engineer			(336)903-9122
	Dean Ledbetter	Division Traffic Engineer			(336)903-9129
High Country Council of Governments	Rick Herndon	Executive Director	P.O. Box 1820	Boone, NC 28607	(828)265-5434
Ashe County Schools	Donnie Johnson	Superintendent	P.O. Box 604	Jefferson, NC 28640	(336)246-7175



Ashe County Economic Development Committee	Patricia Mitchell	Director	150 Government Circle, Suite 2500	Jefferson, NC 28640	(336)846-5502
Wildes Community College - Ashe County Campus	Dr. Gordon Burns	Presiden	P.O. Box 504	Jefferson, NC 28640	(336)838-6100
Ashe County Government	Dan McMillan	County Manager	150 Government Circle, Suite 2500	Jefferson, NC 28640	(336)219-2501





PRIORITIES AND COST ESTIMATES

Item	Location	Proposed Facility	Current Use	Priority	Length	Estimated Cost	Funding Status	Scheduling
1	NC-88/West Main St. - south	Sidewalk	N/A	High	2937	*\$14,685	Funded	2010
2	Bus.221/South Main St.	Sidewalk	N/A	High	195	\$4,875		
3	Bus.221/South Main St.	Retaining Wall	Retaining Wall	High	195	\$15,600		
4	North Main Street	Sidewalk	N/A	High	486	\$12,150		
5	Bus.221/East Main St. - north	Sidewalk	N/A	High	122	\$3,050		
6	Bus.221/East Main St. - north	Sidewalk	Parking Lot	High	537	\$13,425		
7	Bus.221/East Main St. - south	Sidewalk	N/A	High	1,161	\$29,025		
8	Bus.221/East Main St. - south	Sidewalk	Sidewalk	High	382	\$9,550		
9	East/West Main St. @ North/South Main St.	Crosswalk	N/A	High	80	\$4,000		
10	East/West Main St. @ North/South Main St.	Pedestrian Signal	Traffic Signal	High	4	\$4,000		
11	East Main St @ Tyson Park	Crosswalk	N/A	High	40	\$2,000		
12	East Main St. @ Hospital Drive	Crosswalk	N/A	High	40	\$2,000		
13	US Rte 221 @ Government Circle	Crosswalk	N/A	High	40	\$2,000		
14	US Rte 221 @ Government Circle	Pedestrian/Vehicle Signal	N/A	High	2	\$60,000		
SUBTOTAL						\$176,360		
15	Bus.221/South Main St.	Sidewalk	N/A	Moderate	626	\$15,650		
16	North Main Street	Sidewalk	Parking Lot	Moderate	261	\$6,525		
17	Long Street	Sidewalk	N/A	Moderate	1,069	\$26,725		
18	Ashe Street	Sidewalk	N/A	Moderate	535	\$13,375		
19	Court Street	Sidewalk	N/A	Moderate	450	\$11,250		
20	Ivy Street	Sidewalk	N/A	Moderate	224	\$5,600		
21	Hospital Dr into Mt. Village Shopping Center	Sidewalk	N/A	Moderate	912	\$22,800		
22	U.S. Rte 221	Multi-Purpose Trail	N/A	Moderate	2,209	\$110,450		
23	U. Bus.221/South Main St @ Long Street	Crosswalk	N/A	Moderate	40	\$2,000		
24	Bus.221/South Main St @ Long Street	Refuge Island	N/A	Moderate	1	\$15,000		
25	Bus.221/East Main St @ Academy St	Crosswalk	N/A	Moderate	60	\$3,000		



26	Bus.221/East Main St. @ Ivy St.	Crosswalk	N/A	Moderate	60	\$3,000		
27	U.S. Rte 221 @ Academy St.	Crosswalk	N/A	Moderate	40	\$2,000		
28	U.S. Rte 221 @ Academy St.	Pedestrian Signal	Traffic Signal	Moderate	2	\$2,000		
29	Hospital Drive	Crosswalk	N/A	Moderate	20	\$1,000		
SUBTOTAL						\$240,375		
30	NC-88/West Main St. - north	Sidewalk	N/A	Low	3,085	*\$15,425	Funded	2010
31	McConnell Street	Sidewalk	N/A	Low	2,016	\$50,400		
32	Badger Street	Sidewalk	N/A	Low	1,276	\$31,900		
33	Bus.221/South Main St.	Sidewalk	Parking Lot	Low	1,185	\$29,625		
34	Northwest Drive	Sidewalk	N/A	Low	2,200	\$55,000		
35	North Main Street	Sidewalk	Sidewalk	Low	2,355	\$58,875		
36	North Main Street	Sidewalk	N/A	Low	1,493	\$37,325		
37	Martin Street	Sidewalk	N/A	Low	2,453	\$61,325		
38	Wiley Street	Sidewalk	N/A	Low	1,017	\$25,425		
39	Hamilton Drive	Sidewalk	N/A	Low	833	\$20,825		
40	Bus.221/East Main St. - north	Sidewalk	Sidewalk	Low	1,703	\$42,575		
41	Bus.221/EaSt Main St. - south	Sidewalk	Parking Lot	Low	823	\$20,575		
42	Bus.221/East Main St. - south	Sidewalk	N/A	Low	560	\$14,000		
43	Academy Street	Sidewalk	N/A	Low	1,464	\$36,600		
44	U.S. Rte 221	Multi-Purpose trail	N/A	Low	4,911	\$245,550		
45	Bus.221/East Main St. @ Cherry St	Crosswalk	N/A	Low	60	\$3,000		
46	Bus.221/South Main St. near Badger Street	Crosswalk	N/A	Low	40	\$2,000		
47	Bus.221/South Main St. near Badger Street	Refuge Island	N/A	Low	1	\$15,000		
48	NC-88/West Main St. @ McConnell St.	Crosswalk	N/A	Low	40	\$2,000		
49	NC-88/West Main St. @ Northwest Drive	Crosswalk	N/A	Low	40	\$2,000		
50	U.S. Rte 221 @ East Main St.	Crosswalk	N/A	Low	40	\$2,000		
51	U.S. Rte 221 @ East Main St.	Pedestrian Signal	Traffic Signal	Low	2	\$2,000		
SUBTOTAL						\$773,425		
TOTAL						\$1,190,160		

* Cost reflects the Town of Jefferson's 20% share of total cost for this project.

The costs herein provided are intended only to serve as guide for future planning. Actual costs will vary depending upon then-current costs of materials, labor and the necessary preparation and demolition of the site.

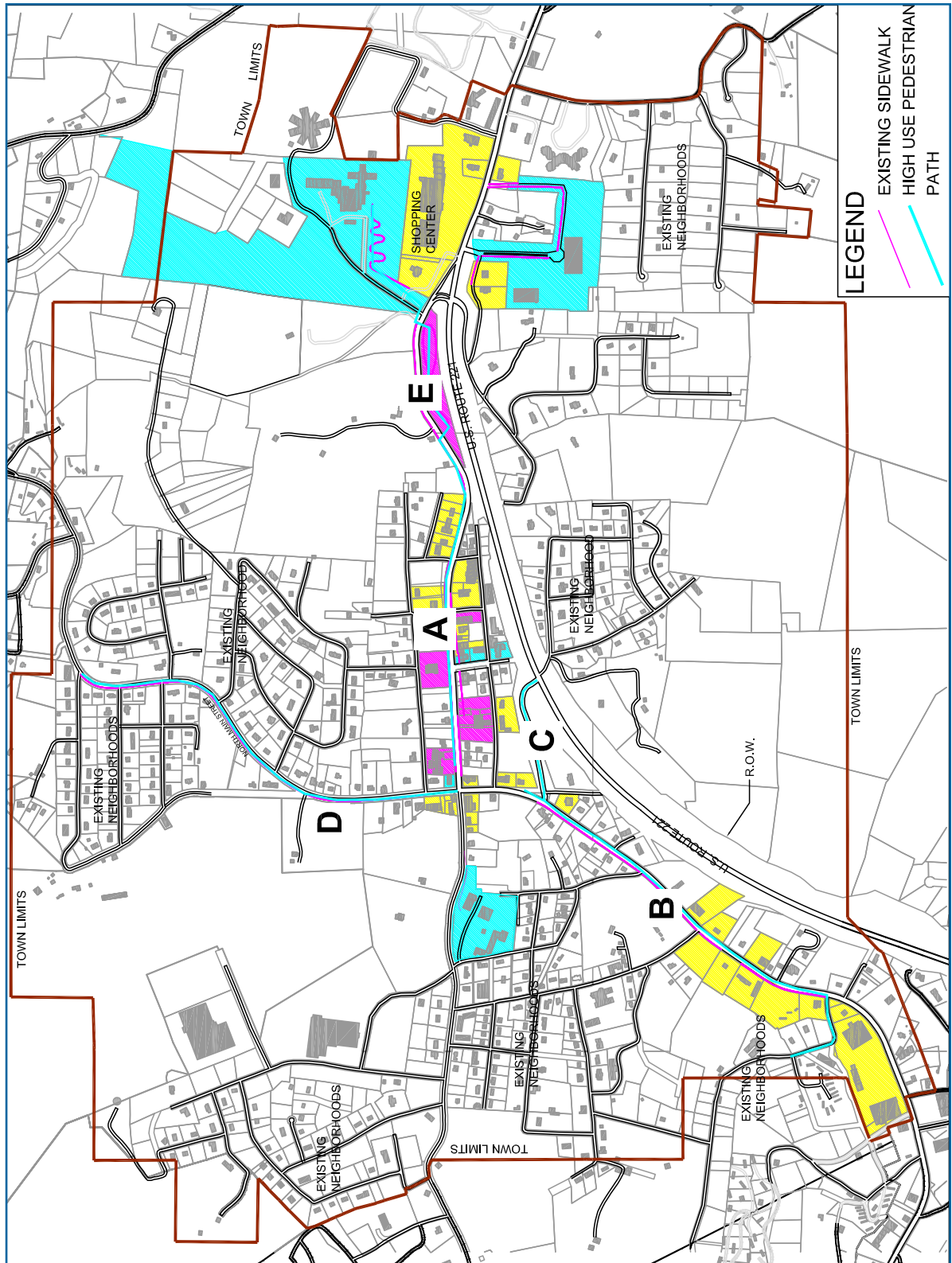


MAP ENLARGEMENTS

Map	Document Page	Appendix Page
Map 2.4-a: High Use Pedestrian Paths	Sec. 2 - 11	IX
Map 2.4-b: Major Destination Areas	Sec. 2 - 12	X
Map 2.4-c: Connectivity and Pedestrian Concerns	Sec. 2 - 13	XI
Map 2.4-d: Police Department Concerns	Sec. 2 - 15	XII
Map 2.8-a: Existing Pedestrian Corridors	Sec. 2 - 19	XIII
Map 2.8-b: Additional Needed Facilities	Sec. 2 - 21	XIV

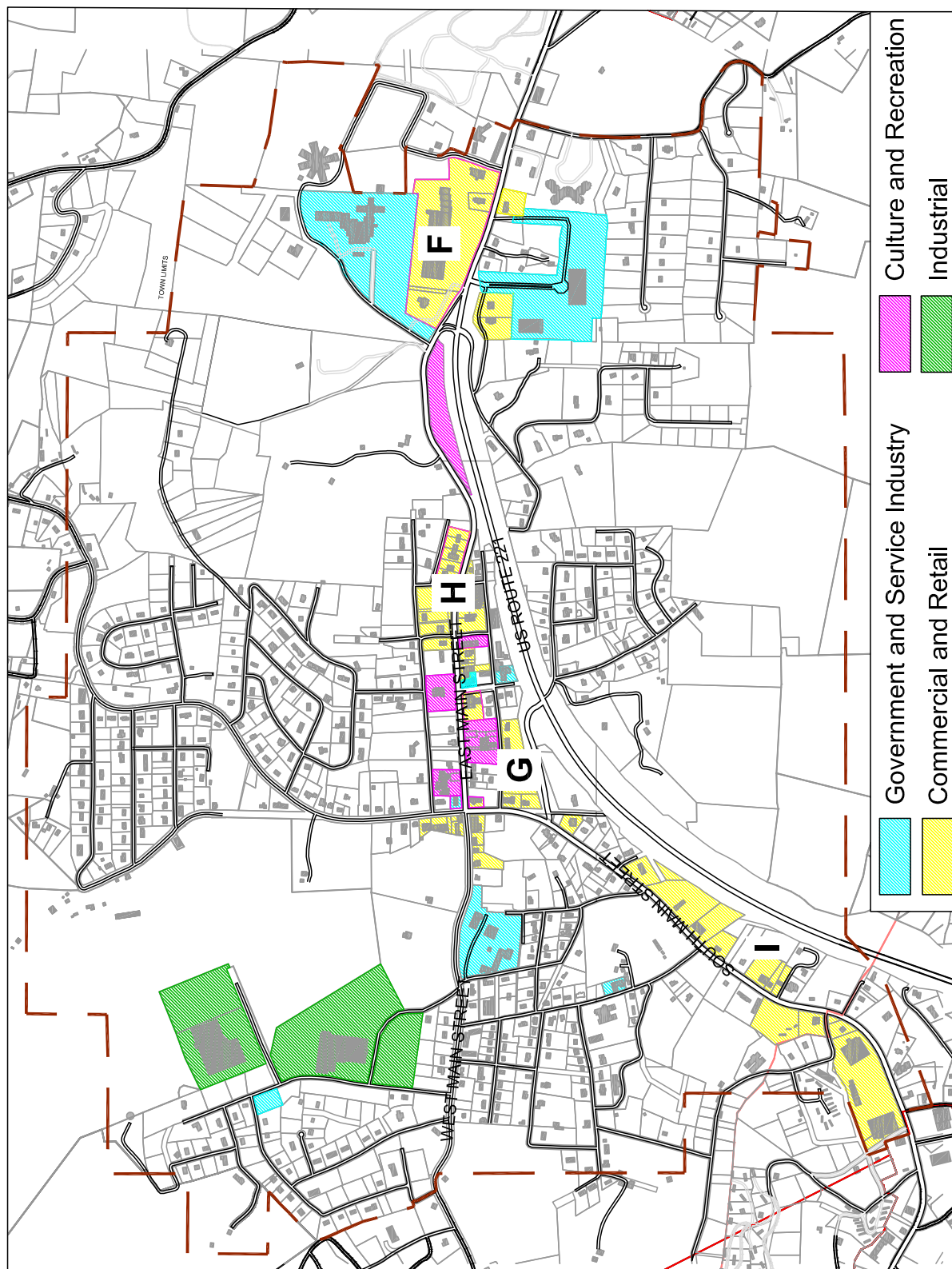


Map 2.4-a: High Use Pedestrian Paths

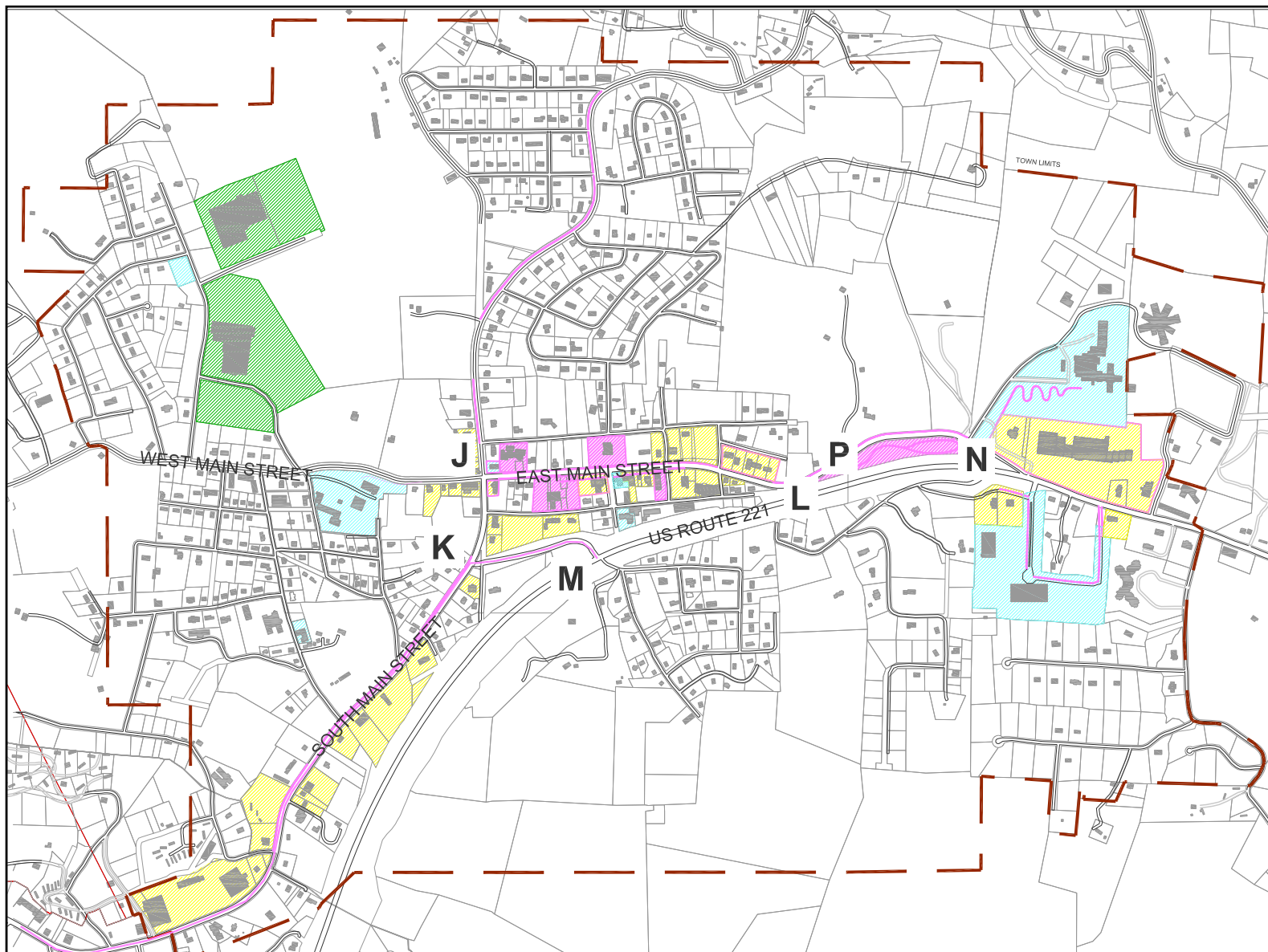




Map 2.4-b: Major Destination Areas

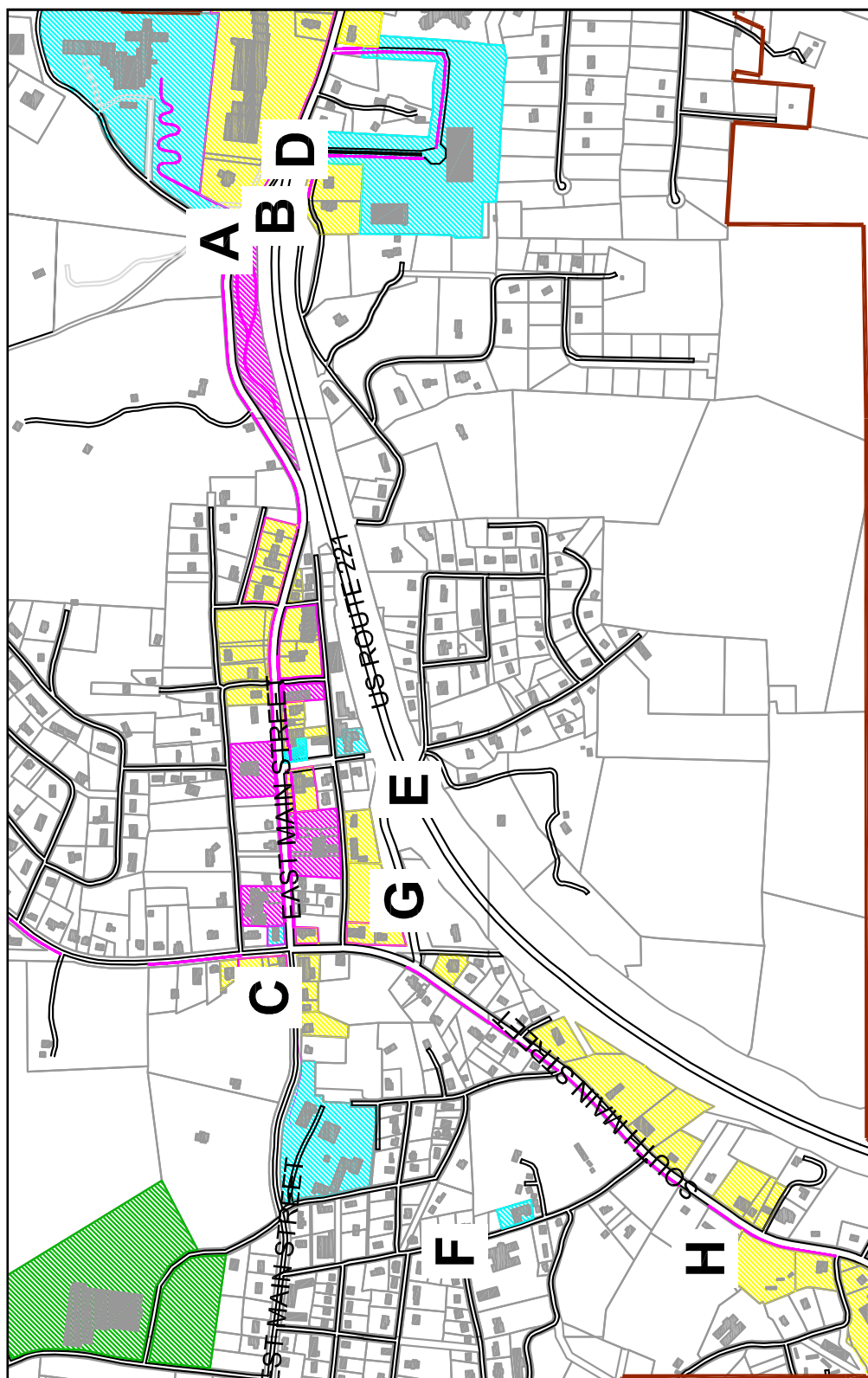


Map 2.4-c: Connectivity and Pedestrian Concerns



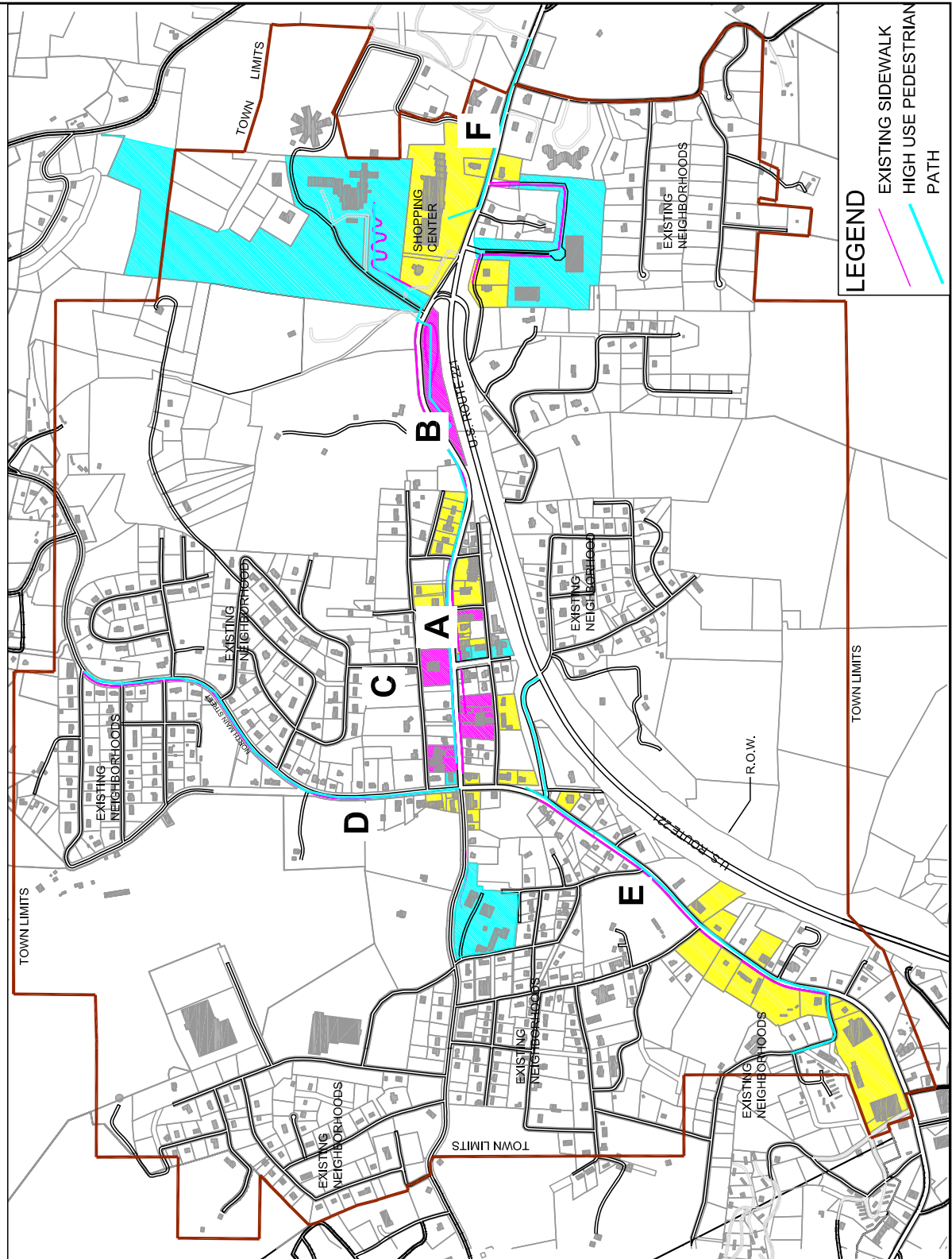


Map 2.4-d: Police Department Concerns



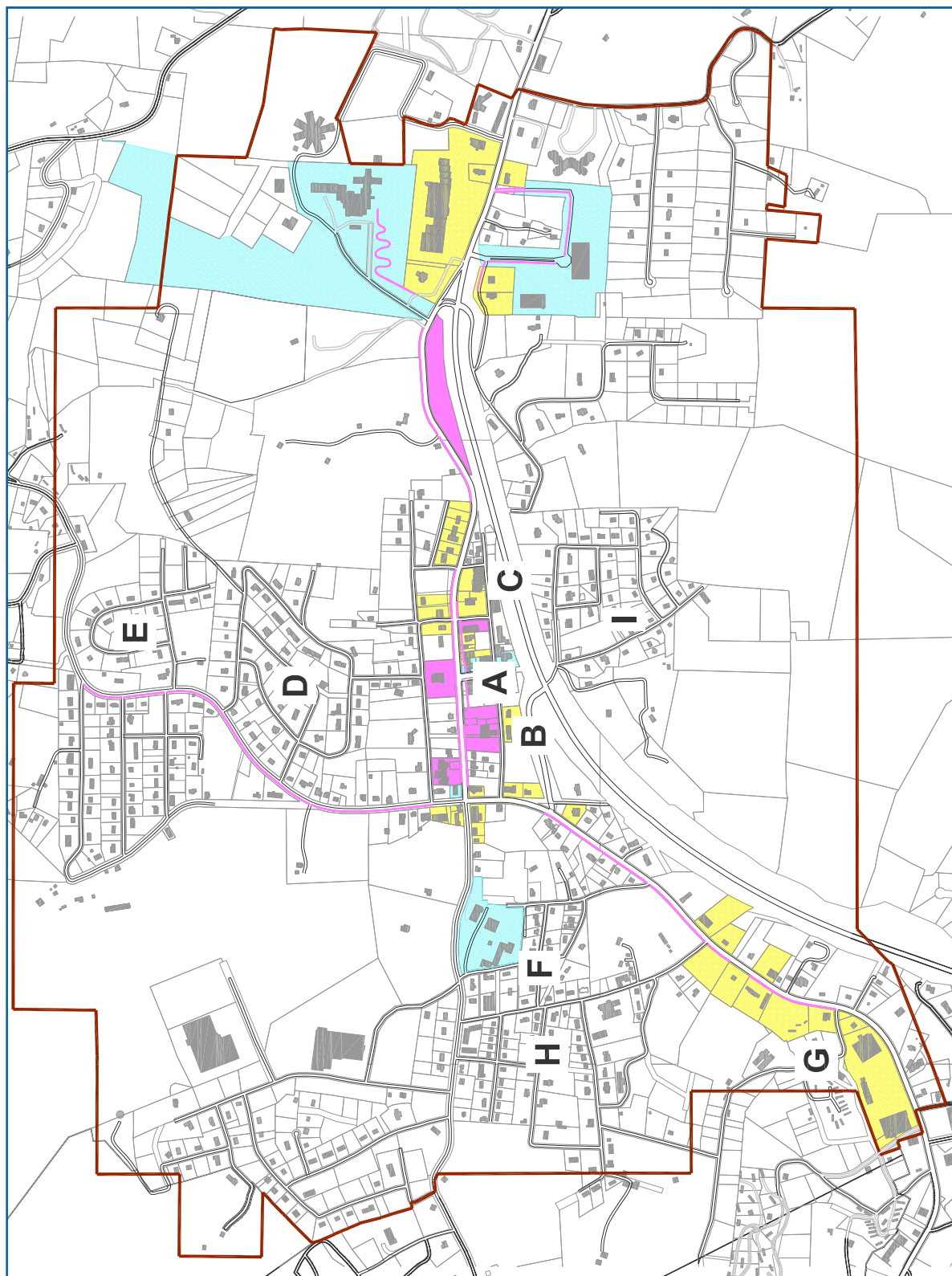


Map 2.8-a: Existing Pedestrian Corridors





Map 2.8-b: Additional Needed Facilities





PUBLICITY FLYER

This flyer was used to publicize the Community Workshop for the Jefferson Comprehensive Pedestrian Plan



TOWN OF JEFFERSON

WALKABLE COMMUNITIES WORKSHOP

BE A PART!

The Town of Jefferson is pleased to announce an exciting community workshop and would like to invite you to take part in this important planning process. The workshop is a dynamic planning approach that is inclusive, cross-disciplinary and seeks to find collaboration in values and vision. We believe you will find this innovative process informative, relevant and worthwhile. While we will focus attention on the possibilities of future sidewalks and greenways, we will also discuss other elements of walkable communities.



ISSUES INCLUDE:

- Greenway Connections
- Sidewalks
- Walking/Running
- Special Facilities
- Pedestrian/Bicycle

Come Share Your Ideas!

The Workshop will be held on Tuesday, November 20th, 2007 at the Jefferson Town Hall. McGill Associates, P.A., will facilitate this meeting.

For More Information Contact:
Town of Jefferson
302 East Main Street
336-846-9368

Workshop Hours

6:00-7:00 PM



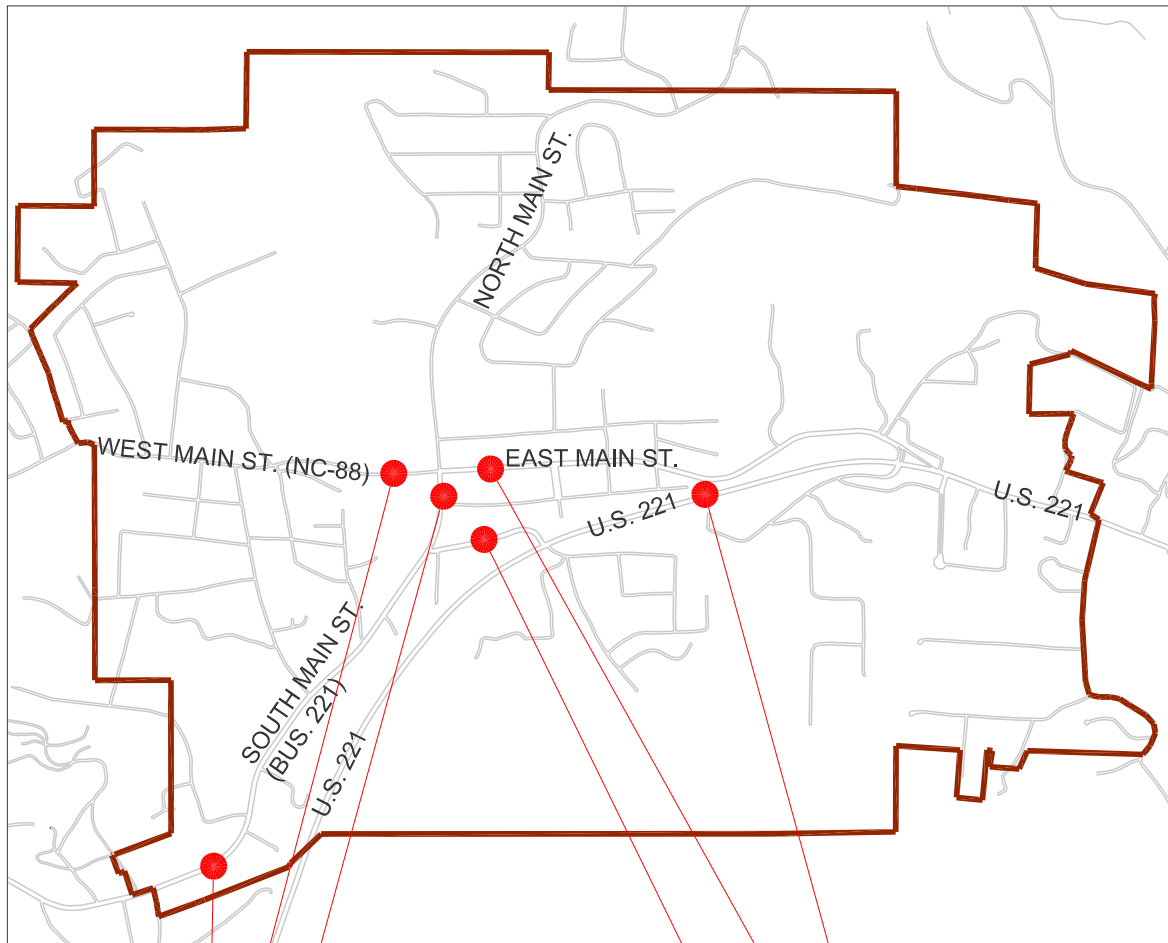
ADDITIONAL MAPS

Map	Appendix Page
Town of Jefferson Traffic Count	XVII
Proposed Pedestrian Network Priorities Map - East	Map 5
Proposed Pedestrian network Priorities Map - West	Map 6



TOWN OF JEFFERSON TRAFFIC COUNT

FROM THE
HIGH COUNTRY COUNCIL OF GOVERNMENTS



10,000

5,600

6,700

12,000

7,800

5,200

ANNUAL AVERAGE DAILY TRAFFIC, 2005

TOWN OF JEFFERSON
COMPREHENSIVE PEDESTRIAN
PLAN

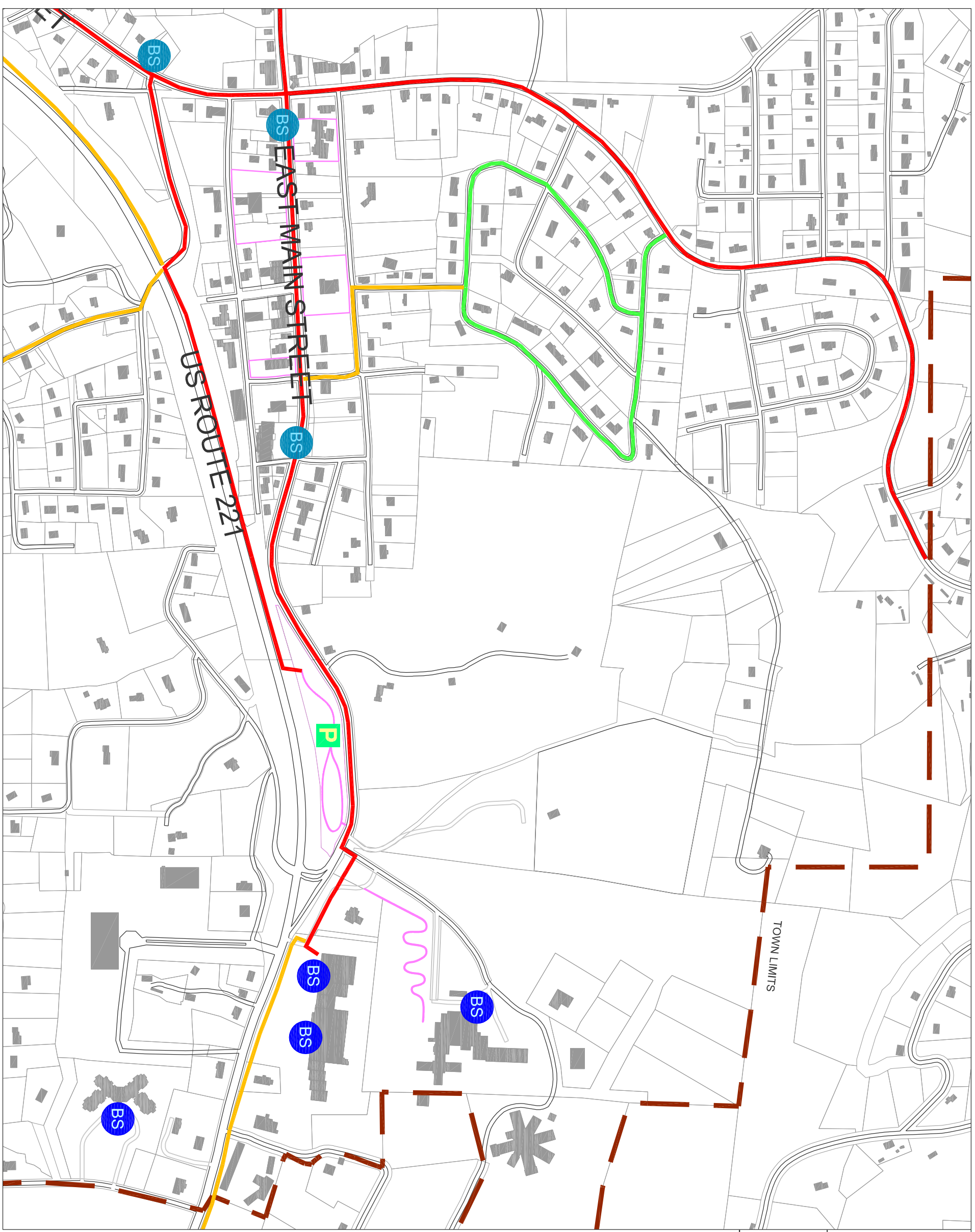
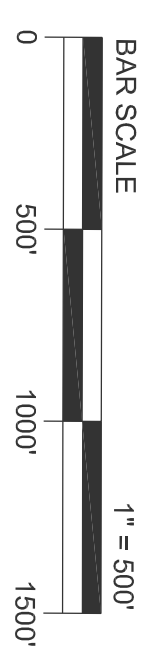
MAP - 5
PROPOSED PEDESTRIAN NETWORK
PRIORITIES - EAST

Legend

- Jefferson Town Limits
- Streets
- Proposed Facilities**
 - High Priority Route
 - Moderate Priority Route
 - Low Priority Route
 - Proposed Crosswalk/Signal Locations
 - Existing Transit Stop
 - Proposed Transit Stop

Pedestrian Destination Points

- Cultural/Recreational Area
- Government/Service Industry
- Retail/Commercial Center
- Residential Area
- Park



TOWN OF JEFFERSON
COMPREHENSIVE PEDESTRIAN
PLAN

Map - 6
PROPOSED PEDESTRIAN NETWORK
PRIORITIES - WEST

- Legend**
- Jefferson Town Limits
 - Streets
 - Proposed Facilites**
 - High Priority Route
 - Moderate Priority Route
 - Low Priority Route
 - Proposed Crosswalk/Signal Locations
 - Existing Transit Stop
 - Proposed Transit Stop
- Pedestrian Destination Points**
- Cultural/Recreational Area
 - Government/Service Industry
 - Retail/Commercial Center
 - Residential Area

